

Foundational Knowledge





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1. Introduction to Healthcare Surge

1.1. Definition of a Healthcare Surge

“Healthcare surge” means different things to people from different disciplines.

- To the operators of healthcare facilities (hospitals, clinics, or other kinds of health care facilities): A healthcare surge can refer to ‘a routine increase in the number of patients which push the facility to or even beyond the limitations imposed on that facility by regulatory agencies.’
- To regulatory agencies: A healthcare surge can refer to a ‘routine situation in which a waiver of certain regulatory requirements to facilitate patient care is justified.’
- To local and regional emergency response planners: A healthcare surge can refer to ‘a situation in which a sudden increase in demands on the healthcare system overwhelms local resources, requiring the waiver of regulatory mandates and activating mutual aid.’
- To statewide emergency response planners: A healthcare surge refers to ‘an overwhelming increase in demands for medical care services arising out of a moderate to severe emergency.’ In such circumstances, the combined federal, state and local public and private resources needed to provide care consistent with optimal patient outcomes may be exhausted, and the exercise of extraordinary powers may be necessary to allow more effective disaster mitigation to occur.

The purpose of this document is not to address the concept of “healthcare surge” in all its permutations. On the other hand, a clear definition of “healthcare surge” is a necessary first step under SEMS (Standardized Emergency Management System) for local government to inform state government when extraordinary measures may be warranted, and to determine the substance of the extraordinary measures taken to mitigate the effects of the emergency.

Healthcare surge is **not** the frequent emergency department overcrowding experienced by healthcare facilities (for example, Friday/Saturday night emergencies). It is also not a local casualty event that might overcrowd nearby facilities but have little to no impact on the healthcare delivery system. Healthcare providers and regulators have well-established procedures for addressing these routine fluctuations in the demand for emergency medical services. Local, regional and hospital emergency planners have Emergency Operations plans and procedures and the Standardized Emergency Management System (SEMS) to address larger local emergencies and to invoke mutual aid from adjacent jurisdictions and facilities, which can permit the timely augmentation of resources to respond to the increased demand. A healthcare surge, as referenced in this guide, specifically relates to a mass casualty or catastrophic event that overwhelms the healthcare delivery system, thus implicating the extraordinary emergency powers of the Governor available under the California Emergency Services Act.ⁱ

For purposes of this document, “healthcare surge” means the following:

A Surge Event is proclaimed in a local health jurisdiction when an authorized local official, such as a local health officer or other appropriate designeeⁱⁱ, using professional judgment determines, subsequent to a significant event or circumstances, that the



healthcare delivery system has been impacted, resulting in an excess in demand over capacity and/or capability in hospitals, community care clinics, public health departments, other primary and secondary care providers, resources, and/or emergency medical services. The local official uses the situation assessment information provided from the healthcare delivery system partners to determine overall local healthcare jurisdiction/operational area medical and health status.



2. The Exercise of Extraordinary Powers during a Healthcare Surge

2.1. The Progression of Medical Mutual Aid in Response to a Mass-Casualty Event

When a mass-casualty event occurs, resources within individual hospitals are mobilized under an incident command system, such as HICS, to deal with the actual or anticipated influx of patients. If conditions within the hospital are sufficiently strained, the hospital may consult with regulatory agencies to determine if specific requirements related to staffing and patient management can be waived to maximize the hospital's response capabilities.ⁱⁱⁱ If circumstances become overwhelming, the hospital may, following local Emergency Medical Services Agency's policies, divert incoming ambulance patients to other hospitals, if available. The hospital may also draw upon resources from other hospitals and facilities to augment its response capabilities.

At this point in the progression, a "healthcare surge," within the meaning of this document, **does not yet exist**. However, hospital administrators can inform appropriate local governmental officials about the limitations of their resources and, more importantly, to request additional resources. This is the first step in the process of identifying a "healthcare surge." It is important to note that there is not a proclamation of surge. The existence of a surge is a determination, which is then communicated within the Standardized Emergency Management System (SEMS) for purposes of obtaining mutual aid and/or seeking the exercise of the Governor's powers.

Local resources would be activated to provide medical mutual aid. Local officials may contact and request aid from other local jurisdictions in the operational area. When local resources in the operational area are overwhelmed, as determined by the authorized local official, it may be determined that a condition of "healthcare surge" exists in the operational area. Separately, a local emergency may be proclaimed by the local governing body or designated official.

The medical and health status of the operational area will be communicated, for example, by the medical health operational area coordinator (MHOAC) or other authorized official, to Regional and State Emergency Operations Centers. The State Emergency Operations Center can draw upon resources statewide to acquire requested mutual aid.

Finally, the Governor has the additional authority to proclaim a "State of Emergency," which can make the resources of state agencies available to mitigate the effects of the emergency. In addition, the Governor's Office can, if needed, request federal resources after proclaiming a "State of Emergency."

2.2. Regulatory Standards as Potential Obstacles to Mitigating Medical Disasters

Up until this point, the focus of the emergency response is the acquisition of requested mutual aid. However, a disaster could be so severe that mutual aid resources statewide are exhausted. For example, it is conceivable that a pandemic of influenza could cause a medical and health disaster in every operational area of the state, with no operational area having resources to share because all jurisdictions are utilizing every available resource to mitigate



the disaster within their operational area. Further, it may not be possible in all circumstances to deliver requested medical mutual aid to an affected operational area in a timely fashion. For example, a severe-magnitude earthquake in the San Francisco Bay region could make roads and bridges into San Francisco impassable, while at the same time causing a “healthcare surge” within that operational area.

In addition to the consequences of such a proclamation which occur by operation of law, the Emergency Services Act (ESA) authorizes the Governor during a “state of emergency” to suspend any regulatory statute, or statute prescribing the procedure for conduct of state business, or the orders, rules, or regulations of any state agency, where the Governor determines and declares that strict compliance would in any way prevent, hinder, or delay the mitigation of the effects of the emergency.^{iv} The authority to suspend statutes is unique to the Governor. Local governing bodies and officials acting under a proclaimed local emergency do not have this power.

The Act also authorizes the Governor to make, amend, and rescind orders and regulations necessary to carry out the provisions of the Act, and further provides that the orders and regulations have the force and effect of law.^v

The effect of a suspension of regulatory statutes and regulations can have several consequences. During the period of the proclaimed emergency and suspension, the suspended statutes and regulations have no force and effect. Consequently, regulatory and law enforcement agencies cannot prevent or penalize persons for failing to comply with the statute or regulation. Further, the statute or regulation cannot provide a basis for finding negligence as a matter of law, which can lessen the potential for civil liability should a person be unintentionally harmed by emergency response activities. The absence of specific regulatory restraints can serve as an incentive for persons to act beneficially to mitigate the effects of the emergency and generally to protect the health and safety and preserve the lives and property of the people of the state without fear of subsequent criminal, administrative or civil liability.

In a medical or health disaster, a suspension of appropriate healthcare-related regulatory statutes and regulations could be used to increase the capacity and/or capability of providers of care to render medical services which, under normal standards, might not be available. Most medical care in California is delivered by persons and entities in the private sector who are highly regulated through the imposition of licensure and certification requirements. Under normal circumstances, a failure to comply with these requirements can result in criminal, administrative, and/or civil liabilities. Not all requirements, however, are indispensable under all circumstances to protect the consumer. For example, a mandated nurse-to-patient staffing ratio, while consistent with expectations for patient care under normal circumstances, may be unworkable in an emergency. This requirement may even be an obstacle to providing care to the increased number of patients in need of care, if hospitals divert ambulance patients for lack of adequate nurse staffing.^{vi}

Generally, state regulatory agencies have administrative discretion in the enforcement of regulatory requirements. During an emergency, the state, including its political subdivisions, is responsible for the mitigation of the effects of the emergency.^{vii} If the strict enforcement of a



regulatory requirement will serve as a disincentive to persons who can assist the state in mitigating the effects of the emergency, it would be in the interest of the state to administratively relax its enforcement of that requirement.

However, the relaxation of administrative or criminal enforcement of a requirement does not eliminate the requirement itself. The requirement is still the law, and as such could provide a basis for the imposition of civil liability. Everyone, including every medical practitioner, is responsible for any injury occasioned to another by his or her want of ordinary care or skill in the management of his or her property or person, unless the injured person has, willfully or by want of ordinary care, brought the injury upon himself or herself.^{viii} The failure to exercise ordinary care is commonly referred to as negligence.

What constitutes ordinary care by a medical practitioner or facility is determined in part by whether the care conforms to the standard exercised by prudent practitioners acting under the same or similar circumstances. Ordinary care may also be determined by the standard established by statutory and regulatory requirements applicable to the medical provider. Thus, failure to comply with these requirements, even if not enforced by the regulatory agency, can establish negligence as a matter of law and lead to liability if the failure to comply with the requirement is a proximate cause of harm to a person.

The determination of what constitutes ordinary care is generally made by the courts, often long after the act or omission which gave rise to the alleged claim or injury. It can be difficult even under normal conditions to describe what constitutes ordinary care by a medical practitioner. What constitutes ordinary care under conditions of disaster may be even less certain. Thus, a provider of medical care faced with a perceived need during an emergency to deviate from the normal standards of care to save a disaster victim's life may have no way of knowing with any degree of certainty prior to rendering care whether rendering assistance may subsequently subject him or her to civil liability. If the perceived risk of liability is too great, the provider may choose to withhold care, or may feel bound to provide care and utilize scarce resources for the one patient rather than benefit a number of patients.

2.3. Immunities from Liability Available in an Emergency

To some extent, the Legislature has already recognized this dilemma. There are several statutes providing qualified immunity to persons rendering aid during an emergency. These immunity provisions instruct the courts not to impose liability in specified emergency circumstances. Thus, if the immunity applies, there can be no liability. This, in turn, may reduce the need for a suspension of regulatory requirements, because the immunity already contemplates that the standard of care is altered in emergency circumstances.

Therefore, before examining more closely the authority and procedures for suspending regulatory statutes or promulgating emergency orders and regulations, or what regulatory statutes, or state agency orders, rules or regulations, if suspended, would assist in the mitigation of the effects of a medical and health emergency, we must first examine the immunities available by law for emergency care.

Healthcare Services during a Proclaimed Emergency at Request of Responsible Government Official



Under the ESA, any physician or surgeon (whether licensed in this state or any other state), hospital, pharmacist, nurse, or dentist who renders services during any state of war emergency, a state of emergency, or a local emergency at the express or implied request of any responsible state or local official or agency is immune from liability for any injury sustained by any person by reason of such services, regardless of how or under what circumstances or by what cause such injuries are sustained.^{ix} This immunity, however, does not apply “in the event of a willful act or omission.”

It has been argued that the phrase “willful act or omission” completely negates the immunity, because every act undertaken by a health facility or professional to render services during an emergency is willful, i.e., the product of a deliberate choice. However, there does not appear to be any case to support such an interpretation of Government Code section 8659. To the contrary, cases interpreting section 2395 of the Business and Professions, the “Good Samaritan” statute for physicians (see below), which contains an identical exclusion for a “willful act or omission,” have repeatedly supported the application of immunity notwithstanding very deliberate actions on the part of the defendants in those cases to treat their patient. For example, in *Burciaga v. St. John’s Hospital*,^x a pediatrician summoned under emergency circumstances to the delivery room administered suction and applied oxygen to an infant in respiratory distress, then secured a transfer of the infant to a neonatal unit in a different hospital, and was still found to be immune. Similarly, in *Bryant v. Bakshandeh*,^{xi} a urologist who was summoned to assist in the catheterization of an infant patient prior to surgery, but despite repeated attempts was unable to do so due to complications, was also found to be immune.

As a general rule, the purpose of statutory construction is to ascertain the intent of the legislature so as to effectuate the purpose of the law.^{xii} The clear purpose of the Government Code section 8659 is to induce providers of medical care to render emergency aid to individuals who otherwise would not receive it. To construe section 8659 to exclude any deliberate attempt to render emergency aid would completely defeat the statute’s apparent purpose. Although it remains unclear precisely what the Legislature intended by the words “willful act or omission,” it seems obvious that it did not intend that the qualification would negate the purpose of the statute altogether.

The immunity provided by section 8659 is distinctive in other ways. Unlike the immunity provided by the Good Samaritan statute for physicians (see below), the services rendered do not need to be emergency care. It appears sufficient that the care was rendered at the express or implied request of an authorized official. Also, unlike the immunity provided to disaster service workers under the ESA (see below), the providers of care do not need to be registered disaster services workers in order to receive the immunity. The facility or professional simply needs to fall within one of the licensure categories described in the statute.

Emergency Care at the Scene of an Emergency

Business and Professions Code section 2395 provides immunity from civil damages to physicians for acts and omissions in rendering emergency care in good faith at the scene of an emergency. The statute specifically includes, but is not limited to, the emergency rooms of hospitals in the event of a medical disaster within the meaning of the phrase “the scene of an



emergency.” The phrase “medical disaster” specifically refers to a duly proclaimed state of emergency or local emergency declared pursuant to the ESA. It applies to acts or omissions which occur after the declaration of a medical disaster and those which occurred prior to such declaration but after the commencement of such medical disaster.

Similar provisions exist for nurses,^{xiii} dentists,^{xiv} licensed vocational nurses,^{xv} physician’s assistants,^{xvi} any person providing on-scene emergency care,^{xvii} physicians providing instructions to EMT-ITs or paramedics,^{xviii} law enforcement and emergency response personnel providing on-scene emergency care,^{xix} and public entities and emergency rescue personnel providing emergency care.^{xx} In some cases, the immunity will not apply where the person is grossly negligent.^{xxi} In other cases, it will apply if the person acted simply in good faith.^{xxii}

Failure to Obtain Informed Consent Under Emergency Conditions

Physicians and surgeons are also immune from civil damages for injuries in emergency situations in their office or in a hospital on account of a failure to obtain fully informed consent where the (1) the patient was unconscious, (2) the lack of informed consent was due to the provider’s reasonable belief that a medical procedure should be undertaken immediately and that there was insufficient time to fully inform the patient or a person authorized to give such consent for the patient.^{xxiii} Either criteria could easily apply under emergency conditions. However, it is unclear whether the concept of “insufficient time” applies only to the needs of the patient being treated, or includes a lack of time due to an overwhelming number of patients requiring treatment.

Lawfully Ordered Services by Disaster Service Workers

In an emergency, the service of persons not already employees of the state will be utilized. These persons may be volunteers registered with the state or local disaster councils, or they may be impressed into service.^{xxiv} The state Office of Emergency Services is required to develop a plan for state and local governmental agencies to utilize volunteer resources during a state of emergency proclaimed by the Governor.^{xxv} Whether a volunteer or someone impressed into service, a person providing disaster relief is referred to as a “disaster service worker.”^{xxvi} In addition, all state and local public employees are, by law, disaster service workers.^{xxvii} Disaster service workers are covered, to the extent funds are available, by worker’s compensation for injuries sustained in the course of training for or providing relief work.^{xxviii} Volunteer disaster service workers are not compensated, but may be reimbursed for expenses.^{xxix}

Disaster service workers are also entitled to the same immunities as public employees,^{xxx} and if performing services during a proclaimed disaster under the ESA are also immune from civil damages on account of personal injury to or death of any person or damage to property resulting from any act or omission in the line of duty, except one that is willful.^{xxxi}

Some volunteers will be medical staff, who will staff casualty stations, establish and operate medical and public health field units; assist in hospitals, out-patient clinics, and other medical and public health installations.^{xxxii} These persons would have immunity for their negligent acts and omissions.

Facilities Used as Mass Care Centers



The same Civil Code section that provides immunity for disaster service workers provides immunity to anyone, including a public agency, who owns or maintains any building or premises which is used as a mass care center, first aid station, temporary hospital annex, or other necessary facility for mitigating the effects of an emergency. The immunity is from liability to any person, who has entered to seek refuge, treatment, care or assistance and while in or upon the premises, for injuries sustained as a result of the condition of the building or premises, or as the result of any act or omission, or as a result of the use or designation of the premises as a mass care center, first aid station, temporary hospital annex, or other necessary facility for emergency purposes. The only exclusions are the willful acts of the owner or occupant or their employees.^{xxxiii}

Health Facilities with Inadequate Resources

By law, emergency services and care must be provided to any person upon request for any condition in which the person is in danger of loss of life, or serious injury or illness, at any health facility licensed by the State that maintains and operates an emergency department to provide emergency services to the public when the health facility has appropriate facilities and qualified personnel available to provide the services or care.^{xxxiv} However, the health facility and its employees, including any physician, surgeon, dentist, clinical psychologist and podiatrist, are immune from liability in any action arising out of a refusal to render emergency services or care if the refusal is based on the determination, exercising reasonable care, that the person is not suffering from an emergency medical condition, or that the health facility does not have the appropriate facilities or qualified personnel available to render those services.^{xxxv}

Hospital Rescue Teams

For purposes of the immunity provision, a “rescue team” is a special group of physicians and surgeons, nurses, and employees of a health facility who have been trained in cardiopulmonary resuscitation and have been designated by the health facility to attempt, in cases of emergency, to resuscitate persons who are in immediate danger of loss of life.^{xxxvi} So long as good faith is exercised, any act or omission of any rescue team of a licensed health facility, or operated by the federal or state government, a county, or by the Regents of the University of California, done or omitted while attempting to resuscitate any person who is in immediate danger of loss of life, is immune from any liability that might otherwise be imposed upon the health facility, the officers, members of the staff, nurses, or employees of the health facility, including, but not limited to, the members of the rescue team, or upon the federal or state government or a county.

Violation of Statute or Ordinance under Emergency Orders

As previously discussed, violation of a statute can provide the basis for a claim of negligence as a matter of law. In an emergency, however, it is a misdemeanor to refuse or willfully neglect to obey any lawful order or regulation promulgated or issued under the ESA.^{xxxvii} Such orders and regulations may compel a person to violate a statute. Consequently, the law also provides that the violation of any statute or ordinance shall not establish negligence as a matter of law where the act or omission involved was required to comply with any regulation, directive, or order of the Governor promulgated under the California Emergency Services Act.^{xxxviii} In addition, a person cannot be prosecuted for a violation of any statute or ordinance when the



violation was required in order to comply with any regulation, directive, or order of the Governor.^{xxxix}

2.4. Suspension of Regulatory Statutes Where Needed to Expand Availability of Care

For purposes of the following discussion, we must assume that the Governor has determined that, despite all the mutual aid provided and the immunities available to professionals and facilities providing emergency care, extraordinary measures must be taken to suspend regulatory statutes under Government Code section 8571 in order to induce providers of medical care to render emergency aid to individuals who otherwise would not receive it. Whether this point is ever achieved may depend upon several factors. For example, some organized health systems may have a contractual responsibility to provide medical care to their members even under disaster conditions, and therefore may be willing to provide care to their customers despite a perceived increased risk of liability. There may also be good reasons, from the standpoint of maintaining good will in the community, for a health facility to do everything within its power following a disaster to provide the medical care services needed by the community. Many of the immunities discussed in the following paragraphs would apply, and these immunities may be sufficient to justify the provision of services despite degraded circumstances.

Nevertheless, there may be a sufficient number of health facilities for which the availability of immunity is uncertain. It is possible that these facilities will continue to provide care as best they can under the circumstances, hoping that subsequently the courts will agree that the circumstances altered the standard of ordinary care or that an immunity will be found to apply. However, some could refuse to provide care beyond what is enabled by activation of the hospital incident command system, because it cannot provide services at a level normally consistent with ordinary care. There is no general statutory or regulatory requirement that healthcare providers be available to provide care to the public under all circumstances.^{xl,xli} Indeed, this fact accounts for the existence of the Good Samaritan laws discussed above.^{xlii}

Therefore, the Governor may be persuaded to suspend those regulatory requirements perceived to be an obstacle to the emergency mitigation effort. The suspension would be implemented through an executive order of the Governor either suspending specific regulatory requirements, or delegating to another state official, e.g. the Director of the Office of Emergency Services, the Emergency Medical Services Authority, or the Department of Public Health, the authority to suspend requirements consistent with the Governor's authority to do so. The proclamation of a state of emergency alone is not sufficient to effectuate a suspension. The proclamation would also need to include a separate order as described above, or would need to implement pre-approved standby orders of a similar nature.^{xliii}

It should be emphasized that, until such an order is issued subsequent to a proclamation of a state of emergency, no regulatory requirement is suspended (except to the extent that the regulatory agency has waived enforcement).^{xliv} Therefore, medical providers not operating under emergency conditions offering immunity must ascertain the existence and scope of the



proclaimed state of emergency, and extent and applicability of any suspension of regulatory requirements.

2.5. Issuance of Emergency Regulations Amending Standards of Care

In addition to the Governor's authority to suspend regulatory requirements, the Governor is also authorized to issue necessary orders, rules and regulations to carry out the provisions of the ESA. These orders and regulations have the force and effect of law.^{xlv} As previously noted, willful violation of these orders and regulations is a misdemeanor.^{xlvi} Such orders and regulations could be used during a medical and health emergency to establish altered standards of care consistent with the ESA's goal of preserving lives.

As with the suspension of regulatory requirements, the decision to issue orders or regulations altering standards of care will depend upon several factors. For example, to what extent will the provision of mutual aid avoid the need to alter standards of care? To what extent will the available immunities provide sufficient protections to professionals and facilities providing emergency care? Given these factors, is an alteration of the standards of care necessary to induce providers to render emergency aid to individuals who otherwise would not receive it?

Orders and regulations of the Governor must be in writing, and take effect immediately. Thus, a proclamation of emergency alone is insufficient to change the standard of care. A separate order, or implement of pre-approved standby orders in conjunction with the proclamation, would be needed.

2.6. Commandeering of Facilities and Personnel

During a proclaimed state of emergency, the Governor is authorized to commandeer or utilize any private property or personnel deemed by him necessary in carrying out the responsibilities hereby vested in him as Chief Executive of the state.^{xlvii} The power to commandeer exists only under a state of emergency, and may only be exercised by the Governor or an authorized designee. It is not available under a local emergency.^{xlviii} It must also be distinguished from other, more commonly used methods, such as contracts and agreements, to obtain necessary resources.

It is conceivable that this power could be exercised to take over the operations of any facility that is unwilling to risk providing expanded services due to a perceived increased risk of liability. However, it is unclear how an order to commandeer a facility or personnel would be implemented. Further, the state is required to pay the reasonable value of the property or personnel commandeered or used.^{xlix}



3. Emergency Preparedness and Response in California

3.1. California Emergency Services Actⁱ

The California Emergency Services Act (ESA) recognizes the State's responsibility to mitigate the effects of natural, manmade, or war-caused emergencies which result in conditions of disaster or in extreme peril to life, property, and the resources of the state, and generally to protect the health and safety and preserve the lives and property of the people of the state.ⁱⁱ To insure adequate preparations to deal with emergencies, the ESA confers emergency powers upon the Governor and upon the chief executives and governing bodies of political subdivisions of the State, provides State assistance for the organization of local emergency response programs, and creates the Office of Emergency Services (OES) within the Office of the Governor.

The ESA recognizes the need to assign emergency functions to State agencies and to coordinate and direct the emergency actions of those agencies. It provides for the rendering of mutual aid by the State and its political subdivisions to carry out the purposes of the ESA. Further, the ESA makes it State policy that all State emergency services functions be coordinated as far as possible with the comparable functions of its political subdivisions, of the federal government, of other states, and of private agencies of every type, to make the most effective use of all manpower, resources, and facilities for dealing with any emergency that may occur.

3.2. Role of the Governor

The Governor is given broad powers under the ESA. Some powers granted to the Governor have been previously discussed, e.g., the power to make, amend and rescind orders and regulations having the force and effect of law,ⁱⁱⁱ to suspend regulatory statutes and regulations,^{liii} and the power to use and commandeer property and personnel.^{liv} In addition, the Governor has powers which are specific to the type of emergency proclaimed.^{lv} For example, during a state of emergency, the Governor has authority over all agencies of State government and the right to exercise all police power vested by law in the State within the area designated.^{lvi} Also during a state of emergency, the Governor can direct all state government agencies to utilize and employ state personnel, equipment, and facilities for the performance of any and all activities designed to prevent or alleviate actual and threatened damage due to the emergency, and he can direct them to provide supplemental services and equipment to political subdivisions to restore any services which must be restored in order to provide for the health and safety of the citizens of the affected area.^{lvii}

In carrying out his/her responsibilities under the ESA, the Governor is assisted by the California Emergency Council.^{lviii} Among other duties, the California Emergency Council must consider, recommend, and approve orders and regulations that are within the province of the Governor to promulgate.^{lix} This would include orders and regulations to suspend regulatory requirements or to alter standards of care.

The Governor is also assisted by the Emergency Response Team for State Operations,^{lx} whose task is to improve the ability of state agencies to resume operations in a safe manner



and with a minimum of delay if their operations are significantly interrupted by a business interruption.^{lxi}

3.3. Governor's Office of Emergency Services

The Office of Emergency Services (OES) is created by the ESA in the Governor's Office.^{lxii} The Governor is required to assign all or part of his powers under the ESA to the Office of Emergency Services,^{lxiii} but cannot delegate to OES his/her authority to issue orders and regulations.^{lxiv} During a state of emergency or a local emergency, the Director of OES is responsible to coordinate the emergency activities of all state agencies in connection with such emergency.^{lxv} It does so through the State Operations Center (SOC) and Regional Emergency Operations Centers (REOC).

OES has established three OES Administrative Regions, the Southern Region, the Coastal Region, and the Inland Region.^{lxvi} These Administrative Regions coordinate emergency management in the six mutual aid regions created by the Governor (see The Concept of Mutual Aid, below).

Within the SOC, the REOCs and Operational Area Emergency Operations Centers, the ICS structure organizes emergency response disciplines into Branches under the Operations Section. The Medical and public health issues are handled by the Medical and Health Branch.

3.4. State Emergency Plan

The Governor is responsible to coordinate the State Emergency Plan and programs necessary for the mitigation of the effects of an emergency. He is also responsible for coordinating the preparation of local plans and programs, and to see that they are integrated into and coordinated with the State Emergency Plan and the plans and programs of the federal government (and of other states) to the fullest possible extent.^{lxvii} By law, the State Emergency Plan is in effect in each political subdivision of the state, and the governing body of each political subdivision is obligated to take whatever action may be necessary to carry out its provisions.^{lxviii}

As part of the state plan, the Governor can assign to a state agency any activity concerned with the mitigation of the effects of an emergency of a nature related to the existing powers and duties of the agency, including interstate activities. Such an assignment makes it the duty of the agency to undertake and carry out that activity on behalf of the state.^{lxix}

In accordance with the State Emergency Plan, the Governor can plan for the use of any private facilities, services, and property and, when necessary, and when in fact used, provide for payment for that use under the terms and conditions as may be agreed upon.^{lxx} This planning authorization is consistent with the Governor's power, described above, to commandeer property and personnel.^{lxxi}

3.5. Emergency Medical Services Authority

The Emergency Medical Services Authority (EMSA)^{lxxii} is required by law to respond to any medical disaster by mobilizing and coordinating emergency medical services mutual aid resources to mitigate health problems.^{lxxiii} The State Emergency Plan (see below) designates



the EMSA as the lead state agency for the medical response to an emergency.^{lxxiv} Also, EMSA is responsible under the Plan for medical situation status and analysis in conjunction with the Department of Public Health.^{lxxv}

Generally, any attendant in a publicly or privately owned ambulance must possess evidence of specialized training as set forth in the emergency medical training and educational standards for ambulance personnel established by EMSA.^{lxxvi} However, this requirement does not apply in any state of emergency declared under the ESA when it is necessary to fully utilize all available ambulances in an area and it is not possible to have the ambulance operated or attended by persons with the qualifications required by EMSA.^{lxxvii}

3.6. State Department of Public Health

The State Department of Public Health (DPH)^{lxxviii} is designated the lead for the public health component of the Medical and Health Services operations set forth in the State Emergency Plan (see below).^{lxxix} Both EMSA and DPH share responsibility for the lead in the Medical/Health Branch. Also, DPH, in conjunction with EMSA, is responsible under the Plan for public health situation status and analysis.^{lxxx}

DPH is also the agency which regulates acute care hospitals and many other health-related facilities.^{lxxxi} Therefore, during the early stages of an incident when acute care hospitals are reaching the limits of their capacity, hospital administrators may contact the Licensing and Certification Division of DPH in their region to obtain waivers of specific regulatory requirements.^{lxxxii}

3.7. The Concept of Mutual Aid

Mutual aid is a concept under which separate jurisdictional or organizational units share and combine resources in order to accomplish their mutual goals. The ESA recognizes that, during emergencies, the rendering of mutual aid by State government, including all its departments and agencies, and its political subdivisions will be necessary to mitigate the effects of the emergency. Public agencies are authorized by law to enter into joint powers agreements, and these agreements can be for the purposes of providing assistance to each other.^{lxxxiii} However, given the number of cities and counties in the State, it would be impractical to require that each jurisdiction have a separate agreement with each other jurisdiction in order to assist each other in the event of an emergency.

Accordingly, one purpose of the ESA is to make it unnecessary for public agencies to execute written agreements to render aid to areas stricken by an emergency.^{lxxxiv} It accomplishes this goal by authorizing state and local public agencies to exercise mutual aid powers in accordance with the California Disaster and Civil Defense Master Mutual Aid Agreement, and local plans, ordinances, resolutions and agreements.^{lxxxv} The Master Mutual Aid Agreement requires that each party develop a plan providing for the effective mobilization of all its resources and facilities, both public and private, to cope with any type of disaster.^{lxxxvi} These plans are known as “mutual aid operational plans.” Under the ESA, a duly adopted and approved emergency plan is deemed to satisfy the Master Mutual Aid Agreement’s requirement for a “mutual aid operational plan.”^{lxxxvii}



As previously discussed, the Governor is authorized to divide the state into mutual aid regions for the more effective application, administration, and coordination of mutual aid and other emergency-related activities.^{lxxxviii} A "mutual aid region" is part of the state, not local, emergency services organization, and is established to facilitate the coordination of mutual aid and other emergency operations within an area of the state consisting of two or more county operational areas.^{lxxxix} (See discussion of Operational Areas, below.) Currently, the State is divided into six mutual aid regions for general mutual aid coordination.^{xc} Each mutual aid region consists of designated counties/operational areas.

Within each mutual aid region, there may be a Regional Disaster Medical and Health Coordinator (RDMHC), who is appointed by the Directors of EMSA and DHS.^{xci} The RDMHC must be either a county health officer, a county coordinator of emergency services, an administrator of a local EMS agency, or a medical director of a local EMS agency (see below for a discussion of these officials). The job of the RDMHC during an emergency is to coordinate the acquisition of requested medical or public and environmental health mutual aid in an affected region to deliver to the area affected by the disaster. In a proclaimed emergency and at the request of EMSA, DHS or OES, an RDMHC in an unaffected region may also coordinate the acquisition of requested mutual aid resources in his/her region.^{xcii}

Mutual aid is not limited to aid between jurisdictions in California. The Governor may also enter into reciprocal aid agreements or compacts, mutual aid plans, or other interstate arrangements for the protection of life and property with other states and the federal government, either on a statewide or a political subdivision basis.^{xciii} The State has entered into two interstate compacts; the Interstate Civil Defense and Disaster Compact^{xciv} and the Emergency Management Assistance Compact.^{xcv} The State can also seek federal mutual aid by requesting a Presidential Declaration of an Emergency or Major disaster under the provisions of the Stafford Act.^{xcvi} A Presidential declaration makes federal assistance programs available, depending on the level of the declaration, as outlined in the Federal Response Plan, which includes contributions from several federal agencies and non-governmental organizations, such as the American Red Cross.

Healthcare Surge General Flow Requests and Resources





3.8. Local Emergency Plans and Local Disaster Councils

The ESA defines “emergency plans” to mean those official and approved documents which describe the principles and methods to be applied in carrying out emergency operations or rendering mutual aid during emergencies. These plans include such elements as continuity of government, the emergency services of governmental agencies, mobilization of resources, mutual aid, and public information.^{xcvii} During a state of emergency, outside aid must be rendered in accordance with approved emergency plans, and public officials are required to cooperate to the fullest extent possible to carry out such plans.^{xcviii}

Cities and counties are authorized to create disaster councils by ordinance.^{xcix} If created, the disaster council is responsible for developing emergency plans.^c The plans must meet any condition constituting a local emergency or state of emergency, including, but not limited to, earthquakes, natural or manmade disasters specific to that jurisdiction, or state of war emergency, and must provide for the effective mobilization of all of the resources within the political subdivision, both public and private.^{ci}

The primary motivation for organizing a disaster council is that the disaster council can register “disaster service workers.” Under the ESA, the OES is authorized to adopt regulations for the classification and registration of disaster service workers.^{cii} The regulations provide that a disaster service worker is a person registered either with OES, a state agency authorized to register disaster service workers, or a disaster council.^{ciii} Registered disaster service workers can be afforded worker’s compensation benefits and liability protections for their acts and omissions during an emergency.

Disaster councils may become accredited by the Office of Emergency Services, by agreeing to comply with the ESA and submitting to the office a certified copy of the ordinance which provides for the disaster council and its leadership, the local emergency organization and compliance with the ESA.^{civ} The main reason for a disaster council to receive and maintain accreditation is that the term “disaster service worker,” for purposes of worker’s compensation benefits, only applies to person registered by an “accredited disaster council” or a state agency.^{cv} Thus, if a volunteer is registered with an unaccredited disaster council, the volunteer arguably is not a “disaster service worker” for purposes of worker’s compensation coverage.

The governing body of a city or county is authorized to provide by ordinance or resolution for the organization, powers and duties, divisions, services, and staff of the emergency organization.^{cvi} This ordinance or resolution, in effect, authorizes individuals within the city or county to take actions in accordance with the emergency plan. The city or county can also authorize public officers, employees, and registered volunteers to command the aid of citizens when necessary during a state of war emergency, a state of emergency, or a local emergency.^{cvi}

It is the legal duty of each organizational component, officer, and employee of each political subdivision of the state to render all possible assistance to the Governor and to the Director of the Office of Emergency Services in mitigating the effects of an emergency. Their emergency powers are subordinate to any emergency powers exercised by the Governor.^{cviii}



3.9. Standardized Emergency Management System

The Standardized Emergency Management System (SEMS) is a system for managing the response to multiagency and multi-jurisdictional emergencies in California.^{cxix} OES has developed regulations to implement SEMS.^{cx} All state agencies are required to use SEMS to coordinate multiple jurisdiction or multiple agency emergency and disaster operations.^{cxii} Every local agency, in order to be eligible for any funding of response-related (i.e., personnel) costs under disaster assistance programs, must also use SEMS to coordinate multiple jurisdiction or multiple agency emergency and disaster operations.^{cxiii} This means that local emergency plans must also incorporate SEMS, assuming the local government wants to be reimbursed for emergency personnel costs.

Incident Command System (ICS)

SEMS is required to be based in part on the concept of the Incident Command System (ICS),^{cxiii} which had been developed and used by the fire services to respond to all types of emergencies. The system standardizes the organizational structure and terminology used by every response agency. ICS recognizes that every response, regardless of size, requires that five management functions be performed:

1. Management – the function of setting priorities and policy direction, and coordinating the response;
2. Operations – the function of taking responsive actions based on policy;
3. Planning/Intelligence – the function of gathering, assessing and disseminating information;
4. Logistics – the function of obtaining resources to support operations; and
5. Finance/Administration – the function of documenting and tracking the costs of response operations.

Even the issuance of a speeding ticket involves each of these five ICS functions, i.e. a policy against speeding, the intelligence gathering which detects and identifies a speeding driver, the operation of pulling the driver over and issuing the citation, the logistics of providing the equipment (car, radar, ticket book) needed to conduct the operation, and the administrative tracking of submitting the citation into the court system. At the other extreme there may be a multi-jurisdictional wildland fire involving the same functions, i.e. a policy of protecting lives and property, intelligence and planning on how to stop the fire, operations in which firefighters and equipment are committed to the fireline, logistics to obtain, equip and support the firefighting operation, and finance/administration to determine how to pay for it all.

As an incident expands in scope, the ICS expands and adapts with it. When multiple jurisdictions or agencies become involved, a “unified command” management organization is formed, under which members representing different organizations at the Incident Command Post establish a common set of objectives and strategies and a single incident action plan.

Multi-Agency Coordination System

Together with ICS, SEMS incorporates the Multi-Agency Coordination (MAC),^{cxiv} in which jurisdictions and organizations work together to coordinate and prioritize the allocation of resources and emergency response activities. In practical application, facilities, equipment,



personnel, procedures and communications are integrated into a common system under an organization typically located as part of an emergency operations center. The multi-agency organization does not direct operational activities, but rather ensures situational and resource status awareness, helps establish policies and priorities, acquires and allocates resources, plans for anticipated resource requirements, and provides strategic coordination.

Mutual Aid

SEMS also embraces the concept of mutual aid, discussed above.^{cxv} SEMS applies this concept by recognizing five organizational levels for response. The levels are in the order in which the levels become involved in the response under the mutual aid concept:

1. Field – where diverse local response organizations (law enforcement, fire, public health) use their own resources to carry out tactical decisions and activities.
2. Local – where local governments, e.g. cities, counties and special districts, manage and coordinate the emergency response and recovery.
3. Operational Area – the entity that coordinates resources, the provision of mutual aid, emergency response and damage information.
4. Regional – manages and coordinates resources and information among operational areas.
5. State – this level is responsible for statewide resource allocation. If State resources are inadequate, this level is integrated with federal agency resources.

It should here be emphasized that under the ESA, unless the parties to a mutual aid agreement expressly provide otherwise, the responsible local official in whose jurisdiction an incident requiring mutual aid has occurred remains in charge at such incident, including the direction of personnel and equipment provided through mutual aid.^{cxvi} Thus, the fact that higher organizational levels become involved in coordinating resources and information does not mean that officials at that higher level take charge of the incident.

Operational Area

The State and regional levels have been discussed previously and are reflected in the ESA. The Operational Area (OA) is also defined in the ESA, and is a required concept of SEMS.^{cxvii} In accordance with SEMS and the ESA, the OA consists of a county and all political subdivisions within the county area, and serves as an intermediate level of the state emergency services organization.^{cxviii} The governing bodies of each county and of the political subdivisions in the county are authorized to organize and structure their OA. An OA is used by the county and the political subdivisions comprising the OA for the coordination of emergency activities and to serve as a link in the communications system during a state of emergency or a local emergency.^{cxix}

There are 58 OAs in California. Practically speaking, the OA within the SEMS structure is embodied in its emergency operations center (EOC). An EOC is a location from which centralized emergency management can be performed.^{cxx} Political subdivisions within a county may have their own EOCs in addition to the Operational Area EOC. OES has an Operational Area Coordinator assigned to each OA.



The OA EOC must be distinguished from department operations centers (DOC). Under SEMS, a DOC is an emergency operations center used above the field level by a specific discipline (e.g., flood operations, fire, medical, hazardous material), or a governmental unit (e.g., Department of Public Works or Department of Health).^{cxxi} There may be as many DOCs as there are public agencies involved in the response above the field level.

Communications

Finally, SEMS addresses the concept of emergency communications by supporting networks to ensure that all levels of government can communicate during a disaster. Two systems have been established:

1. The Response Information Management System (RIMS) – an electronic data management system that links emergency management offices throughout California.
2. The Operational Area Satellite Information System (OASIS) – a portable satellite-based network that provides communication when land-based systems are disrupted.

In addition, there are discipline specific communications systems, such as the California Health Alert Network (CAHAN). CAHAN is the emergency preparation and notification system used by the California Department of Health Services and many emergency preparedness stakeholders and partners associated with public health. CAHAN contains both an alerting system that provides rapid notification of emergencies to public health stakeholders and partners and a highly secure web-based document repository used for the creation and collaboration of information pertaining to preparation and/or response to various incidents or events.

3.10. Medical and Health Disaster Plans

If an operational area has a medical health operational area coordinator (MHOAC), the MHOAC is responsible for the development of a discipline-specific operations plan known as the “medical and health disaster plan” for the provision of medical and health mutual aid for the operational area. The medical and disaster plans must comply with the framework established by SEMS.^{cxix}

At a minimum, the medical and health disaster plan, policy, and procedures must include the following components relevant to healthcare surge:

1. Assessment of immediate medical needs.
2. Coordination of disaster medical and health resources.
3. Coordination of patient distribution and medical evaluations.
4. Coordination with inpatient and emergency care providers.
5. Coordination of out-of-hospital medical care providers.
6. Coordination and integration with fire agencies personnel, resources, and emergency fire pre-hospital medical services.
7. Coordination of providers of non-fire based pre-hospital emergency medical services.
8. Coordination of the establishment of temporary field treatment sites.



9. Health surveillance and epidemiological analyses of community health status.
10. Provision or coordination of mental health services.
11. Provision of medical and health public information protective action recommendations.
12. Investigation and control of communicable disease.^{cxxiii}

During a medical or health disaster, the MHOAC is responsible for implementing this plan, and coordinating with the Regional Disaster Medical Health Coordinator (RDMHC) on the acquisition of resources or the movement of patients to other jurisdictions.



3.11. Persons Responsible for Local and Regional Emergency Response Related to Healthcare Surge

Thus far, we have discussed the role of the following State officials at the State and, to some extent, regional levels in emergency preparedness and response:

1. Governor
2. California Emergency Council/State Emergency Response Team
3. Office of Emergency Services (OES)
4. Emergency Medical Services Authority (EMSA)
5. Department of Health Services (DHS)
6. OES Administrative and Mutual Aid Regions
7. Regional Disaster Medical Health Coordinator (RDMHC)

It is often said that all emergencies are local. We have already discussed the role of the Operational Area within the SEMS framework, and the fact that the Operational Area consists of the political subdivisions within a county. We now discuss the local officials involved in emergency response as it relates to healthcare surge.

Local Governing Body

The local governing body can be either the county board of supervisors or a city council. These bodies are authorized to proclaim a “local emergency.”^{CXXIV} They may also designate an official by ordinance who can proclaim local emergencies.^{CXXV} During a proclaimed local emergency, political subdivision of the state have full power to provide mutual aid to any any affected area in accordance with local ordinances, resolutions, emergency plans, or agreements,^{CXXVI} and state agencies are authorized to provide mutual aid in accordance with mutual aid agreements, or upon direction from the Governor.^{CXXVII}

The local governing body is also authorized during a local emergency to promulgate orders and regulations necessary to provide for the protection of life and property, including orders or regulations imposing a curfew within designated boundaries where necessary to preserve the public order and safety.^{CXXVIII}

County Director of Emergency Services

Counties may appoint a County Director of Emergency Services, however in absence of this, by virtue of his/her office, the county sheriff serves in this role.^{CXXIX} The county director of emergency services has all the duties prescribed by state law and executive order, the California Disaster and Civil Defense Master Mutual Aid Agreement, mutual aid operational plans, and by county ordinances and resolutions.^{CXXX}

County Emergency Medical Services Agency/Medical Director

Each county is authorized to develop an emergency medical services program. Each county developing such a program must designate a local EMS agency. It may be the county health department, or a separate agency established and operated by the county. It may also be an



entity with which the county contracts or a joint powers agency created for the administration of emergency medical services by agreement between counties.^{cxxxix}

Every local EMS agency shall have a full- or part-time licensed physician and surgeon as medical director, to provide medical control and to assure medical accountability throughout the planning, implementation and evaluation of the EMS system.^{cxxxii}

Health Officer

Each county is required to appoint a health officer.^{cxxxiii} The county health officer is responsible to enforce and observe in the unincorporated territory of the county, the orders and ordinances of the board of supervisors pertaining to the public health and sanitary matters, orders, including quarantine and other regulations, prescribed by DPH, and statutes relating to public health.^{cxxxiv}

There is similar authority for the appointment of city health officers.^{cxxxv} However, most cities contract with the county health officer to provide local public health services.^{cxxxvi} At present, only three cities in California operate their own public health departments. Thus, in most counties, the county health officer has jurisdiction throughout the county.

Both city and county health officers are authorized, regardless of whether or not an emergency is declared, to take measures as may be necessary to prevent the spread, or the occurrence of additional cases, of any communicable disease that he or she reasonably believes may exist within his or her jurisdiction.^{cxxxvii} This includes the power to quarantine and isolate persons, animals or places, conduct investigations and examinations, and to disinfect where necessary to protect public health.^{cxxxviii} The local health officer can also require, during an outbreak of disease, or when an outbreak appears imminent, that health care providers disclose their inventories of critical medical supplies, equipment, pharmaceuticals, vaccines, or other products that may be used for the prevention of, or may be implicated in the transmission of communicable disease.^{cxxxix}

In addition, during any “state of war emergency,” “state of emergency,” or “local emergency,” a local health officer is authorized to take any preventive measure within his or her jurisdiction that may be necessary to protect and preserve the public health from any public health hazard. For purposes of this authorization, the term “preventive measure” means abatement, correction, removal or any other protective step that may be taken against any public health hazard that is caused by a disaster and affects the public health.^{cxl}

In some jurisdictions, the local health officer is authorized by the governing body to declare a local emergency.^{cxli} A local health officer may also declare a “local health emergency” whenever there is an imminent and proximate threat of the introduction of any contagious, infectious, or communicable disease, chemical agent, non-communicable biologic agent, toxin, or radioactive agent, in the jurisdiction or any area thereof affected by the threat to the public health.^{cxlii} However, such a declaration does not carry all the implications of a “local emergency.” Only the immunity granted to hospitals, physicians and other medical practitioners under section 8659 of the Government Code (see above) is implicated.^{cxliii} Otherwise, the declaration only authorizes the exercise of mutual aid,^{cxliv} allows the exchange of health information, and authorizes the determination of the cause of the emergency.^{cxlv}



When an incident first arises, the local health officer may issue an order authorizing first responders to immediately isolate exposed individuals that may have been exposed to biological, chemical, toxic, or radiological agents that may spread to others. Such an order lasts only two hours, but may be sufficient time to allow the health officer to reach the scene of the incident, and to issue more comprehensive orders if needed.^{cxlvi}

County Director of Environmental Health

Some counties have separated the public health and environmental health responsibilities of the local health officer by creating a comprehensive environmental health agency.^{cxlvii} During a local emergency or a state of emergency, the county director of may be responsible for the coordination of emergency response under his/her jurisdiction. However, during a health emergency declared by the board of supervisors, or a county health emergency declared by the local health officer (see above), the local health officer shall have supervision and control over all environmental health and sanitation programs and personnel employed by the county during the state of emergency.^{cxlviii}

Medical Health Operational Area Coordinator

Each OA may appoint a Medical Health Operational Area Coordinator (MHOAC). The MHOAC may be the local health officer and the county emergency medical services coordinator acting jointly, or a separate person appointed by these officials. The MHAOC is responsible, under the local emergency plan, to coordinate with inpatient and emergency care providers, assess medical needs, and coordinate disaster medical and health resources, among other things.^{cxlix}

In the event of a local, state, or federal declaration of emergency, the MHOAC must assist the OES operational area coordinator in the coordination of medical and health disaster resources within the OA.^{cl} The MHOAC is also the point of contact in that OA, for coordination with the RDMHC, OES at the regional level, DPH, and EMSA.

County Coroner

Each county in California has either a Sheriff/Coroner, a Coroner, or a Medical Examiner.^{cli} His/her duty is to manage the remains of deceased persons within the county, their personal effects if necessary,^{clii} and to inquire into the cause of deaths under specified circumstances.^{cliii} In a mass casualty event also involving mass fatalities, this officer serves as the OA Coroner Mutual Aid Coordinator.^{cliv} The state is divided into seven coroners mutual aid regions, and each region has a Coroners Regional Mutual Aid Coordinator.

Each operational area Coroner/Medical Examiner is advised to develop local contingency plans to deal with mass fatality events, including those involving chemical, biological and radiological contamination of human remains. These plans should also address issues such a storage capacity for human remains, and disposition of remains, including cremation, isolated burial, mandatory mass disposition, and return to family.^{clv}

3.12. Healthcare Surge Emergency Response

When a mass-casualty event occurs, hospitals would activate Emergency Operations Plans and mobilize under an incident command system, such as the Hospital Incident Command System (HICS) to manage the actual or anticipated influx of patients. If conditions within the



hospital are sufficiently strained, the hospital may consult with regulatory agencies to determine if specific requirements related to staffing and patient management can be waived to maximize the hospital's response capabilities. If circumstances become overwhelming, the hospital can divert inbound ambulance patients, if possible, or patients that have been medically screened and deemed stable for transfer to other hospitals, or to alternate care sites established by local authorities.

All private entities, (e.g., private hospitals, clinics, pre-hospital providers, and ambulance services), would obtain their necessary day-to-day support and operational resources through their internal systems and suppliers. However, it is important even at this stage for healthcare providers to early establish their contacts with the local/OA medical and health coordinators to apprise them of the provider's status and anticipated needs. The reliance upon internal systems and suppliers would hold true until the impact of the situation overwhelmed the entities' normal support mechanisms or a local or state of emergency was declared.

Under these conditions, the specific entity's logistical functions would place their medical and health-related support or resource requests through the local jurisdictional medical and/or health coordinator. It is important to note that, during a declared local or state of emergency, private entities must direct their requests for medical and health support and resources through the SEMS process that often times utilizes Multi-Agency Coordinating Groups to coordinate activities and establish allocation of scarce resources among competing entities.

The local medical and health coordinator for the affected jurisdiction would identify the situation, contact the MHOAC if necessary, and request the resources that are needed based on the event. The MHOAC, in cooperation with the OES OA EOC, would attempt to acquire the needed resources within the OA.

At this point in the progression, a "healthcare surge" within the meaning of this document does not yet exist. However, a request for additional resources represents the first step in establishing the existence of surge. If the demands for resources become overwhelming at the local level, then the "healthcare surge" status of that OA would be changed to reflect that a surge exists in that OA.

The MHOAC can request mutual aid from other OAs, and contact the RDMHC for regional assistance. The RDMHC, in coordination with the Regional EOC, would attempt to acquire the needed resources within the region.

The Medical Health Branch Representative in the State Operations Center would be notified. The Medical and Health Branch Representative (either from CDHS or EMSA) would coordinate with the CDHS Department Operations Center (CDHS DOC), Emergency Medical Services Authority Department Operations Center (EMSA DOC) or when co-located, the Joint Emergency Operation Center (JEOC). The medical and health branch in the SOC would coordinate with unaffected regions. CDHS and EMSA would fill the request at the State level from resources under their control and would be responsible for processing the resource request(s) received via the SOC. If the request(s) cannot be filled from within the state, the State would then contact the Federal Emergency Management Agency (FEMA) to request deployment of federal resources.



At any point in this progression, a “local emergency” or “state of emergency” could be proclaimed. Once a state of emergency is proclaimed, even RDMHCs from unaffected regions can be utilized to coordinate the acquisition of requested mutual aid on behalf of the affected region.

Finally, if the Governor has determined that, despite all the mutual aid provided and the immunities available to professionals and facilities providing emergency care, extraordinary measures must be taken to suspend regulatory statutes under Government Code section 8571 in order to enable providers of medical care to render emergency aid to individuals who otherwise would not receive it. In addition, the Governor could issue orders and regulations to establish altered standards of care consistent with the ESA’s goal of preserving lives, or to commandeer property and personnel.

3.13. Termination of the Emergency

A local emergency proclaimed by a designated local official terminates by operation of law after seven days, unless the proclamation has been ratified by the local governing body.^{clvi} If a local emergency has been proclaimed by the local governing body, the governing body must review the need for continuing the local emergency at its regularly scheduled meetings until the emergency is terminated.^{clvii} The governing body must proclaim the termination of the local emergency at the earliest possible date that conditions warrant.^{clviii}

Similarly, the Governor must proclaim the termination of a state of emergency at the earliest possible date that conditions warrant.^{clix} All of the powers granted to the Governor under the ESA for a state of emergency terminate upon the proclamation.^{clx} Thus, to the extent that the Governor has suspended regulatory statutes or altered standards of care by regulation, those suspensions and alterations would automatically end when the Governor proclaims the termination of the state of emergency.



4. Surge Monitoring Tool

The Surge Monitoring Tool provides a systematic methodology to approach healthcare surge in order to measure the movement away from “normal” operations to an overall systematic surge on the local, regional, and state level. This tool should serve as a guideline for healthcare personnel to understand the progression of surge from the effective management of day-to-day operations to exceeding state-wide resources in order to address the increased demand for healthcare capacity and capability. A clear understanding of the healthcare jurisdiction/Operational Area's healthcare delivery system status as it relates to the three levels of surge proclamation (local, regional, and state) will provide clarification of the related trigger to initiate the authority to provide the appropriate regulatory and statute flexing. Further description of this relationship may be found in Section V: Surge Level Enabling Authorities.

A Surge Event is proclaimed in a local health jurisdiction when an authorized local official, such as a local health officer or other appropriate designee^{clxi}, using professional judgment determines, subsequent to a significant event or circumstances, that the healthcare delivery system has been impacted, resulting in an excess in demand over capacity and/or capability in hospitals, community care clinics, public health departments, other primary and secondary care providers, resources, and/or emergency medical services. The local official uses the situation assessment information provided from the healthcare delivery system partners to determine overall local healthcare jurisdiction/operational area medical and health status.

Healthcare Delivery System Status

During a healthcare surge the authorized local official will use color-coded descriptors to designate the status of the local healthcare jurisdiction/operational area's (OA) healthcare delivery system. Surge status does not necessarily connote a specific emergency proclamation. The designations of the color descriptors will be made using the professional judgment of the authorized local official, and will provide other OAs, the RDMHC and/or Regional Disaster Medical Health Specialist (RDMHS) and State agencies, with a clear understanding of the local healthcare jurisdiction/OAs status.

- **GREEN:** Local health jurisdiction system/OA is operational in usual day-to-day status. No assistance required.
- **YELLOW:** Most healthcare assets within the local health jurisdiction are experiencing a surge and are able to manage the situation within their organizational frameworks. No assistance required.
- **ORANGE:** The healthcare assets in the local health jurisdiction require the participation of additional healthcare assets within the health jurisdiction to contain the situation.
- **RED:** Local health jurisdiction is not capable of meeting the demand for care, and assistance from outside the local health jurisdiction/OA is required.
- **BLACK:** Local health jurisdiction not capable of meeting the demand for care, and significant assistance from outside the local health jurisdiction/OA is required.

Levels of Surge Event Proclamation

Local Surge Event



- Occurs when options to meet the demand for care are exceeded within the local health jurisdiction and require the assistance of contiguous OAs.
- Proclamation will render relaxation of certain regulations and standards.

Regional Level Surge

- Occurs when options to meet the demand for care are exceeded within the healthcare region and require the assistance of the state.
- Proclamation will render increased relaxation of regulations and standards.

Statewide Level of Surge

- Occurs when options to meet the demand for care are exceeded at the state level and require outside assistance.
- Proclamation will render highest level of relaxation of regulations and standards.



5. Surge Level Enabling Authorities

The Surge Level and Enabling Authorities Chart illustrates the relationship between the level of surge and the enabling triggers to implement relative surge response activities. The Chart includes the five levels of a local surge event, as well as a regional level surge and statewide level of surge.

There is a direct correlation between the level of surge and the related trigger to initiate the authority to provide the appropriate regulatory and statute flexing. It is important to note that depending on the severity of a local healthcare surge, as described in the Surge Monitoring Tool, regulatory agency waivers may not suffice in terms of providing adequate flexibility, and a local emergency proclamation may be issued to increase the options of response.

Surge Level	Local Surge Event					Regional Level Surge	Statewide Surge Level
	Green	Yellow	Orange	Red	Black		
Enabling Triggers to Implement Surge Response	Regulatory Agency Waiver	Regulatory Agency Waiver	Regulatory Agency Waiver/ Local Emergency Proclamation	Local Emergency Proclamation	Local Emergency Proclamation	State of Emergency Declaration	Federal Emergency Declaration

For additional information regarding potential regulatory waivers and statute flexing please reference the Declaration and Triggers Tool in the Operational Tool Manual. The tool provides a quick reference for suggested changes in legal/operational requirements to facilitate a more effective surge response. This operational tool includes the enabling governmental actions that are required in order to implement the suggested changes. It is important to acknowledge there are a number of other reporting obligations that are unlikely to be waived or impacted in a disaster, such as meningococcal meningitis and botulism. Relaxation is dependant upon circumstances that cannot be predicted ahead of time as it is an executive decision of the Governor's.



6. Surge Orders and Suspensions

This section provides examples of surge orders, and suspensions and administrative actions that may be drafted to facilitate timely and appropriate regulatory assistance during a healthcare surge. The decision to implement these measures is a decision made by the Governor and the Director of Emergency Services.

6.1. Standby Order for Surge Suspension

1. Pursuant to section 8571 of the Government Code, the Director of Emergency Services (or DHS and EMSA) shall suspend such regulatory statutes, or statutes prescribing the procedure for conduct of state business, or the orders, rules, or regulations of any state agency, where the Director (or DHS and EMSA) determines and declares that strict compliance with the statute, order, rule, or regulation would in any way prevent, hinder, or delay the mitigation of the effects of the emergency.

(See below for lists of statutes/regulations to be suspended.)

6.2. Regulations to Alter Standard of Care

1. All persons providing medical care within the affected area may render such care for the purpose of saving the greatest number of lives, and shall have no obligation to commence, render or continue care where, in the good faith judgment of the person(s) responsible for medical triage, the allocation of medical resources to render care to the individual would be inconsistent with the goal of saving the greatest number of lives.
2. To the extent possible, all persons injured shall be provided palliative care, regardless of individual chances for survival.

6.3. Regulations to Expand Immunities

1. For purposes of Government Code section 8659, the term “hospital” includes any temporary hospital annex, intermediate care facility, skilled nursing facility, clinic, mass care, first-aid station or other facility utilized to mitigate the effects of the emergency.
2. (Pandemic Influenza Only) - A public entity, public employee, or volunteer participating in the national immunization program to respond to the pandemic influenza emergency shall not be liable for an injury cause by an act or omission in the promotion of a community immunization program or the administration of vaccine in a community program, including residual effect of the vaccine, unless the act or omission constitute willful misconduct.

6.4. Regulations to Implement Population Based Outcomes/Ethics

1. Section 4733 of the Probate Code (relating to advanced directives) is hereby suspended within the affected area and in such other areas as the Director of Emergency Services determines to be necessary to mitigate the effects of the emergency.
2. For purposes of section 2397 of the Business and Professions Code, within the affected area, and such other areas as the Director of Emergency Services determines to be necessary to mitigate the effects of the emergency, the term “insufficient time” shall include both insufficient time to obtain informed consent prior to responding to the medical needs of



the patient, and a lack of time to obtain informed consent due to competing demands to treat other patients suffering from the effects of the emergency.

3. Whenever in the affected area the persons authorized by section 7100 of the Health and Safety Code to control the disposition of the remains of a deceased person is not immediately available, or is unable to take possession of the remains of the deceased person in a manner consistent with the preservation of public health and safety as determined by the local health officer, the county coroner may control or dispose of the remains of the deceased person in any manner consistent with the preservation of public health and safety or the instructions of the local health officer, including mass or individual interment, cremation, or cold storage if reasonably available. A provider of health care in the affected area in possession of the remains of a deceased person is not responsible to comply with the terms and conditions of any advanced healthcare directive pertaining to the disposition of remains. The coroner shall maintain records regarding the manner of disposition. The decision by the local health officer or the county coroner in selecting the manner of control or disposition of the remains shall be deemed an act of discretion.
4. In making decisions whether to commence, render, or continue medical care, other than palliative care, an individual with a pre-existing medical condition requiring care shall be evaluated on the same basis as an individual whose medical condition is the result of the emergency.
5. A person or entity providing medical care within the affected area shall have no liability for a decision in good faith to withdraw or withhold medical care from an individual upon learning of a reasonably apparent emergency requiring his or her immediate attention elsewhere, or upon instructions from a superior to assume duties elsewhere. Such decisions shall be deemed an exercise of discretion for purposes of section 820.2 of the Government Code.

6.5. Administrative

1. Letter to HHS Secretary requesting waiver pursuant to 42 USC 1320b-5 of:
 - a. HIPAA: Requirement to Obtain Patient Consent to speak with family or friends
45 CRR 164.510; 42 U.S.C. 1320b-5(b)(7)(A)
 - b. HIPAA: Requirement to Honor Opt Out Request Obtain for Facility Directory
45 CRR 164.510; 42 U.S.C. 1320b-5(b)(7)(A)
 - c. HIPAA; Requirement to Distribute Notice
45 CRR 164.520; 42 U.S.C. 1320b-5(b)(7)(B)
 - d. HIPAA; Patients Right to Request Privacy Restrictions and Confidential Communications
45 CRR 164.522; 42 U.S.C. 1320b-5(b)(7)(C)
2. Letter to HHS Secretary requesting waiver pursuant to 42 USC 247d of vaccine adverse reaction reporting (Pandemic Flu only) under 42 USC 300aa-14, -25.
3. Statutes/Regulations to be considered for suspension:

Public Health Reporting



Cancer Registry Reporting - Health & Saf. Code 103875, et seq.

Burns & Smoke Inhalation Reporting - Health & Saf. Code 13110.7

Health Facility Administration

Transfers of Patients; Violations - Health & Saf. Code 1317.4

Inventory of Medical Supplies - Health & Saf. 120176

Unusual Occurrence Reports - 22 CCR 70737, 71535

Medication Errors Reporting - Bus. & Prof. Code 4125; 16 CCR 1711

Occupational Illness & Injury Reporting - Labor Code 6409; 8 CCR 14003

Work-Related Fatalities Reporting - 8 CCR 342

Criminal Behavior

Child Abuse & Neglect Reporting - Penal Code 11164, et seq.

Elder & Dependent Abuse Reporting - Welf.& Inst. Code 15600, et seq.

OSHPD Reporting Requirements - Health & Saf. 128765, et seq.

Not Included:

Disease Reporting - Health & Saf. Code 120130; 17 CCR 2500

Birth Reporting - Health & Saf. Code 102400

Death Reporting - Health & Saf. Code 102775

Cancer Registry Reporting - Health & Saf. Code 103875, et seq.

Violence against Hospital Personnel - Health & Saf. Code 1257.7

Violence against Community Healthcare Worker - Labor Code 6332

Suspicious Injury Reports - Penal Code 11160, et seq.

Gunshot, Knife Wound Reporting - Penal Code 11161.8

Safe Medical Device Reporting - 21 USC 360

Joint Commission Sentinel Event Reporting - The Joint Commission Manual PI.1.10, 2.20, 3.10

6.6. Alternate Care Sites

1. Any hospital, mobile hospital, temporary hospital annex, mass care center, first-aid station, or other similar facility established by any public entity in the effected area shall be exempt from the requirements of Division 2 and Part 7 of Division 107 of the Health and Safety Code. Such facilities shall be established and operated in accordance with the State Emergency Plan and local emergency plans. The Licensing and Certification Division of the State Department of Health Services shall, to the extent reasonably possible, advise public entities on reasonable and appropriate measures under the circumstances to protect the health and safety of persons in the facility.



2. Letter to HHS Secretary requesting waiver pursuant to 42 USC 247d of CLIA requirements under 42 USC 263a.

6.7. Existing Facilities

1. Letter to HHS Secretary requesting waiver under 42 USC 1320b-5 of EMTALA required examination and treatment of emergency med. conditions & women in labor under 42 USC 1395dd.
2. Statutes/Regulations to be considered for suspension:

Acute Care Hospitals

Nurse Staffing Ratio - 22 CCR 70217

Gen. Acute Care Hospitals; Conversion of Space for other uses. - 22 CCR 70805

Gen. Acute Care Hospitals; Limitation to Licensed Beds - 22 CCR 70809

Gen. Acute Care Hospitals; Out of Scope

Supplemental Services - 22 CCR 70301

Gen. Acute Care Hospitals; Out of Scope Special Services - 22 CCR 70351

Skilled Nursing Facilities

Skilled Nursing Facilities; Conversion of Space for other uses. - 22 CCR 72603

Skilled Nursing Facilities; Limitation to Licensed Beds - 22 CCR 72607

Intermediate Care Facilities

Intermediate Care Facilities; Conversion of Space for other uses. - 22 CCR 71605

Intermediate Care Facilities; Limitation to Licensed Beds - 22 CCR 73609

Acute Psychiatric Hospitals

Acute Psychiatric Hospitals; Conversion of Space for other uses. - 22 CCR 71605

Acute Psychiatric Hospitals; Limitation to Licensed Beds - 22 CCR 71609

Primary Care Clinics

Primary Care Clinics; Conversion of Space for other uses. - 22 CCR 75072

6.8. Personnel

1. Statutes/Regulations to be considered for suspension:

Physicians

Physician, Inactive - Bus. & Prof. Code 702, 902

Physician, Retired - Bus. & Prof. Code 2439

Physician, Federal/Military;

Practice Outside Federal Facility - Bus. & Prof. Code 715, 718

Pharmacists

Pharmacist, Inactive - Bus. & Prof. Code 702



Pharmacist, Out-of-State - Bus.& Prof. Code 900

Dentists

Dentist, Federal;

Practice Outside Federal Facility - Bus. & Prof. Code 715

Nurses

Nurse, Federal;

Practice Outside Federal Facility - Bus. & Prof. Code 715

6.9. Supplies, Pharmaceuticals & Equipment

1. Statutes/Regulations to be considered for suspension:

Pharmacists: Only Pharmacist May Dispense

Prescription Drugs - Bus. & Prof. Code 4051

Pharmacy: Requirement for Prescription to Dispense Prescription Drugs - Bus. & Prof. Code 4059

Pharmacists; Labeling, Employee Ratio, and Consultation Requirements - Bus. & Prof. Code 4062

Bagley-Keene Open Meeting Act as to Pharmacy Board where purpose is to considers waiver of requirements

under - Bus.&Prof Code 4062.

6.10. Funding Sources

1. Letter to HHS Secretary requesting waiver of Title XVIII (Medicare, 42 U.S.C. 1395, et seq.), Title XIX (Medicaid, 42 U.S.C. 1396, et seq.), and Title XXI (State Children's Health Program, 42 U.S.C. 1397aa, et seq.) administrative conditions for assistance under 42 U.S.C. 1320b-5 and 5141.
2. Waiver by CDHS of documentation requirements if authorized by federal law.



7. Standard of Care

This section covers the discussion, literature review and definition of Standard of Care during a healthcare surge.

7.1. What is Standard of Care?

The Standard of Care in California is defined by the scope of practice each provider is licensed to provide. It provides a framework to identify the professional responsibilities of licensed personnel and permit individual licensed personnel to be rationally evaluated, to ensure that it is safe, ethical and consistent with the professional practice of the licensed profession in California¹⁶². Standard of Care is a legal concept that not only encompasses the diagnosis and treatment of patients but overall management of patients as well.¹⁶³

The law requires that licensed healthcare personnel, when caring for patients, adhere to the customary skill and care that is consistent with good medical practice. Diligence implies compliance with laws and regulations (for example, licensing requirements). Standard of Care covers all aspects of treatment - from the administering of proper medications to performing open-heart surgery.

For the purposes of this document, **Standard of Care during a Healthcare Surge is the degree of skill, diligence and reasonable exercise of judgment in furtherance of optimizing population outcome during a healthcare surge event that a reasonably prudent person or entity with comparable training experience or capacity would have used under the circumstances.**

Under normal conditions, current standards of care might be interpreted as employing appropriate health and medical resources to improve the health status and/or save the life of each individual patient. However, according to a report by, Health Systems Research Inc., *Altered Standards of Care in Mass Casualty Events*; an AHRQ¹⁶⁴ Publication, April 2005) in the aftermath of a mass casualty event, the demand for care provided in accordance with normal conditions (current standards) would exceed system resources resulting in a healthcare surge. Therefore, it is critically important to identify, plan, and prepare for making the necessary adjustments in current health and medical care standards to ensure that the care provided in response to a healthcare surge results in as many lives being saved as possible.

The AHRQ report further states that currently no universally accepted definition of Standard of Care during a mass casualty event exists. Joint Commission refers to such standards as “graceful degradation” under which care and access to caregivers may become rationed. Per the AHRQ report, *Altered Standards of Care* is referred to as “a shift to providing care and allocating scarce equipment, supplies, and personnel in a way that saves the largest number of lives in contrast to the traditional focus on saving individuals.” According to the report, examples of shift in care include:

- “Triage efforts that will need to focus on maximizing the number of lives saved. Instead of treating the sickest or the most injured first, triage would focus on identifying and reserving immediate treatment for individuals who have a critical need for treatment and are likely to survive. The goal would be to allocate resources in order to maximize the number of lives



saved. Complicating conditions, such as underlying chronic disease, may have an impact on an individual's ability to survive.

- Triage decisions that will affect the allocation of all available resources across the spectrum of care: from the scene to hospitals to alternate care sites. For example, emergency department access may be reserved for immediate-need patients; ambulatory patients may be diverted to alternate care sites (including nonmedical space, such as cafeterias within hospitals, or other nonmedical facilities) where "lower level" hospital ward care or quarantine can be provided. Intensive or critical care units may become surgical suites and regular medical care wards may become isolation or other specialized response units.
- Needs of current patients, such as those recovering from surgery or in critical or intensive care units; the resources they use will become part of overall resource allocation. Elective procedures may have to be cancelled, and current inpatients may have to be discharged early or transferred to another setting. In addition, certain lifesaving efforts may have to be discontinued.
- Usual scope of practice standards that will not apply. Nurses may function as physicians, and physicians may function outside their specialties. Credentialing of providers may be granted on an emergency or temporary basis.
- Equipment and supplies that will be rationed and used in ways consistent with achieving the ultimate goal of saving the most lives (e.g., disposable supplies may be reused).
- Not enough trained staff. Staff will be scared to leave home and/or may find it difficult to travel to work. Burnout from stress and long hours will occur, and replacement staff will be needed. Some scarce and valuable equipment, such as ventilators, may not be used without staff available who are trained to operate them.
- Delays in hospital care due to backlogs of patients. Patients will be waiting for scarce resources, such as operating rooms, radiological suites, and laboratories.
- Providers that may need to make treatment decisions based on clinical judgment. For example, if laboratory resources for testing or radiology resources for x-rays are exhausted, treatment based on physical exam, history, and clinical judgment will occur.
- The psychological impact of the event on providers. Short- and long-term stress management measures (e.g., Critical Incident Stress Management programs) are essential for providers and their families.
- Current documentation standards that will be impossible to maintain. Providers may not have time to obtain informed consent or have access to the usual support systems to fully document the care provided, especially if the health care setting is damaged by the event.
- Backlog in processing fatalities. It may not be possible to accommodate cultural sensitivities and attitudes toward death and handling bodies. Numbers of fatalities may make it difficult to find and notify next of kin quickly. Burial and cremation services may be overwhelmed. Standards for completeness and timeliness of death certificates may need to be lifted temporarily."



While the examples suggest how clinical practices might shift, the definition of Altered Standards of Care does not explore the liability and compliance issues that could arise. The following principles were used to support the definition of "Standard of Care" described at the beginning of the section.

Guiding Principles

- The Adjusted or Altered Standard of Care during a healthcare surge will be **"the"** Standard of Care available and should be termed "Standard of Care during a Healthcare Surge".
- The Standard of Care definition, under normal conditions, adapted for large number of victims as opposed to individual patients, would apply to healthcare surges.
- The definition should broaden the scope of caregivers and afford protection to not just licensed personnel but also volunteers and facilities.
- The "under the circumstances" clause in the definition for "Standard of Care during a Healthcare Surge" provides some protection to healthcare providers (facilities, personnel and volunteers) during a healthcare surge as long as there is evidence to support that there was no negligence, appropriate steps were taken (planning, periodic training, relevant documentation, etc.) and that there was reasonableness demonstrated.



8. Surge-Related Ethical Principles

When a physician graduates from medical school, he/she swears to an oath that embodies the ethics and ideals of Hippocrates, the acknowledged father of modern medicine. Translated from the traditional Greek version, the Hippocratic Oath emphatically states that a physician should "Above all, do no harm" to the patients he / she serves. An excerpt from this oath reads, "I will remember that I remain a member of society, with special obligations to all my fellow human beings." In the current state of medicine, each licensed provider of care has an overarching obligation to treat every individual patient to the best of his or her abilities.

During mass casualty events such as epidemics, terrorist attacks and natural and other disasters that result in large numbers of victims, the demand for medical care may exceed available resources to deliver that care. Surge capacity planning for such resource poor environments must therefore consider a departure from the individual patient-based outcomes that physicians have been long conditioned to uphold in favor of an approach that saves the most lives. In other words, 'clinicians will need to balance the obligation to save the greatest possible number of lives against that of the obligation to care for each single patient.'¹⁶⁵ To the fullest extent possible, this migration of a provider's obligation from individual responsibility to population outcome should adhere to the long-standing principles of ethical practice. Those rendering care must be informed of surge status in their community so that they can adjust their practices accordingly.

Much planning has been undertaken at the federal, state and local levels to enhance surge capacity in response to a large-scale emergency resulting in mass casualties. In August of 2004, the Agency for Healthcare Research and Quality (AHRQ) convened a panel of experts drawn from the fields of bioethics, emergency medicine, disaster management, health administration, law and public health. The deliberations of this panel led to a report, *Altered Standards of Care in Mass Casualty Events*, which outlines a number of important issues and policy recommendations. Two years later, in March of 2006, the New York State Task Force on Life and the Law, at the request of the New York State Department of Health, convened a workgroup to consider clinical and ethical issues in the allocation of mechanical ventilators in an influenza pandemic. A draft for public comment concerning this subject matter was posted on the CDHS website on March 15, 2007.

The following principles have been adapted from the Public Health Leadership Society's *Principles of the Ethical Practice of Public Health*.¹⁶⁶

Principle #1: The authorized local official has an ethical obligation to utilize all readily accessible information in a responsible way and in a timely manner in making a determination that a healthcare surge situation exists. The health and medical aspects of system response to a healthcare surge should be coordinated and informed by consideration of ethics.

It is essential that the communication regarding a healthcare surge is accurate and uniform throughout the area affected by the healthcare surge. The following principle combines the thought leadership behind the Public Health Leadership Society's *Principles of the Ethical Practice of Public Health* and AHRQ's *Altered Standards of Care in Mass Casualty Events*.¹⁶⁷



Principle #2: To the fullest extent possible under the circumstances of a healthcare surge, the authorized local official and those working under his/her direction and authority should provide those in the community with accurate information pertaining to the nature of the healthcare surge and the responses to it with reasonable frequency.

To further ensure adherence to this principle, the following points should be kept in mind:

- Moving to a population-based set of treatment protocols represents a radical departure from patient-based decision making. It is essential that efforts be made well in advance of a surge event to generate public understanding and acceptance for the change.
- Messages should be as consistent and timely as possible at all stages
- Official health and medical care messages should be delivered through public media by the local physician health officer (or other local physician (e.g., hospital or medical group chief of staff) whom the public perceives to have knowledge of the event and the area), the California state health officer, a representative of the Centers for Disease Control and Prevention, or the Surgeon General depending on the level of communication necessary.
- Spokespersons at all levels (local, State, regional, Federal) should coordinate their messages
- Modes of communication should be tailored to the type of information to be communicated, the target audience for which it is intended, and the operating condition of media outlets, which may be directly affected. Attention to the need to use languages other than English and the use of alternative communication channels outside of usual media outlets are examples of specific concerns. Also, specificity and details within messages would vary by target population (affected area vs. neighboring area vs. the rest of the state).

While the first two principles above speak to the declaration of surge and the communication that must result, the next principles address the important issues that healthcare facilities and workers must face and the difficult decisions required of them. The next principle is adapted from AHRQ's *Altered Standards of Care in Mass Casualty Events*.¹⁶⁷

Principle #3: In planning for a healthcare surge, healthcare personnel should aim to maintain functionality of the healthcare system and to deliver a quality of care that is optimal under current circumstances. Those persons involved in formulating and implementing the response to a healthcare surge should pursue the goal of preserving as many lives as possible. In pursuit of this goal, those persons should strive, to the fullest extent possible, to respect individual rights and community norms, including but not limited to the following circumstances:

- In establishing and operationalizing an adequate framework for the delivery of care
- In determining the basis on which scarce resources will be allocated

The goal of saving as many lives as possible is thus infused with an aim to respect the individual rights of the patient wherever and whenever possible. While apparently contradictory, it describes the ethical challenge of providing care during a healthcare surge. At a time when resources are scarce and time is compromised, reasonable exercise of clinical judgment must still come into play when making decisions.



While the ethical challenge of principle #3 rests on the shoulders of the 'people on the ground' during a healthcare surge, principle #4 emphasizes the responsibility of the healthcare community as a whole.

Principle #4: Reasonable accommodations should be made for the personal needs and commitments of those healthcare and other personnel responding to the healthcare surge.

Examples of the reasonable accommodations that should be made include the provision of housing, food, transportation, child care / pet care or mental health support needed by healthcare and other personnel in order to effectively respond to a healthcare surge.



9. Caring for Populations with Special Needs

Caring for populations with special needs during a healthcare surge poses many challenges. Ideally, community based organizations will be involved in the planning, response, and recovery of healthcare surge event.

In disaster preparedness, the term “vulnerable” or “special needs” people or populations are used to define groups whose needs are not fully addressed by traditional service providers. It also includes groups that cannot comfortably or safely access and use the standard resources offered in disaster preparedness, response and recovery. This includes, but is not limited to, those who are physically and/or mentally disabled (blind, cognitive disorders, mobility limitations), limited or non-English speaking, geographically or culturally isolated, medically or chemically dependent, homeless, Deaf and hard-of-hearing, frail elderly and children.¹⁶⁸

When planning for a healthcare surge, it is essential that the special needs of several groups within the general population be taken into consideration. These needs may vary and include but are not limited to:

- Communicating disaster information in a variety of languages. Having translators available at intake centers
- Providing mental health assessment resources within the healthcare setting
- Delivering emergency food, health care and counseling
- Providing alternative housing for displaced persons
- Providing shelter facilities with appropriate support services
- Providing for alternate means of decontamination for babies and other non-ambulatory persons or those unable to sufficiently decontaminate themselves due to developmental or mobility limitations
- Ensuring vulnerable persons have services for an effective recovery
- Addressing long term recovery issues
- Recognizing and incorporating cultural and/or religious beliefs into the delivery of services

In *Meeting the Needs of Vulnerable People in Times of Disasters: A Guide for Emergency Managers*, the California Governor's Office of Emergency Services suggests that involving organizations and services designed to serve groups with special needs might be an appropriate approach.¹⁶⁸

'Community-based organizations (CBOs) provide a direct link to the local communities and the vulnerable people that CBOs serve.' Emergency management could be improved with the involvement of CBOs because they:

- Have pre-established networks for delivering services
- Have access to communities the government may not be able to reach
- Understand the needs of their vulnerable clients
- Have the ability to respond quickly to local issues



- Enhance the cultural competency of government to meet needs
- Have the ability to often times provide information to people in their own language

Needless to say, a victim's underlying medical condition, such as a physical or development disability, may affect his/her survivability, and therefore may be considered negatively when using the “Acceptable Criteria for Resource Allocation among Patients” that are listed in the “Scarce Resource Allocation” section below. However, community-based organizations bring expertise in delivering services to accommodate people and communities with language, cultural, and accessibility needs. The most effective way to provide the 'greatest good to the greatest number' of individuals with special needs is to have CBOs active in the response and recovery plan. It is suggested that Memoranda of Understanding with CBOs be established in planning for a healthcare surge. Please refer to the Appendix for a sample Inter-Agency Memorandum of Understanding between the county of Sonoma and the Volunteer Center of Sonoma County. This MOU was taken directly from *Meeting the Needs of Vulnerable People in Times of Disasters: A Guide for Emergency Managers*.¹⁶⁸

For more information regarding emergency preparedness guidelines for pediatrics and persons with disabilities, please refer to the Appendix.



10. Guidelines to Promote Population-Based Outcome Principles

Healthcare providers should be able to fully adhere to the standards established by existing laws and the core values and principles of public health law and ethics during a healthcare surge. Such individuals should depart from those core values and principles only when the nature and extent of the healthcare surge precludes full adherence to them.

However, it is inevitable that during a healthcare surge, individuals providing healthcare services in licensed healthcare facilities and alternate care sites will be unable to fully adhere to statutes, regulations and professional standards of practice relating to patient rights and professional ethics, including obtaining informed consent; honoring advance healthcare directives; communicating with healthcare agents, surrogates and next of kin; providing services to special needs populations; withdrawing care; and disposing of human remains. As such, it is anticipated that the legal requirements concerning such rules will be waived by government authorities. The guidelines included below aim to alleviate, to the extent possible, concern over the liability associated with making such difficult decisions.

Guideline #1: Informed Consent during a Healthcare Surge

A healthcare provider is not obligated to obtain informed consent, as that term is defined by applicable facility policy and/or professional standards of practice, before rendering a healthcare service or procedure during a healthcare surge, when any one or more of the following circumstances are present:

1. The patient is unconscious, the healthcare provider believes that the service or procedure should be undertaken immediately, and the healthcare provider believes the patient's legal representative for healthcare decisions is not immediately available. (See Tool #3 relating to communication with legal representatives for healthcare decisions.)
2. The medical service or procedure is undertaken without the consent of the patient because the healthcare provider believes that the service or procedure should be undertaken immediately and there is insufficient time to fully inform the patient.
3. A medical service or procedure is performed on a person legally incapable of giving consent, and the healthcare provider believes that the procedure should be undertaken immediately and there is insufficient time to obtain the information consent of the person authorized to give such consent for the patient.

Healthcare providers are required to document the presence or absences of these circumstances if, and only if, time, circumstances and professional judgment permit such documentation.

Guideline #2: Advanced Healthcare Directives during a Healthcare Surge

Providers should attempt, whenever possible, to accommodate advanced healthcare directives during a healthcare surge. However, a healthcare provider is obligated to inquire about, read or adhere to an Advanced Healthcare Directive, as that term is defined under applicable facility policy, state law and/or professional standards of practice, before rendering a healthcare service or procedure during a healthcare surge, if and only if all of the following circumstances are present:



1. The healthcare provider is aware of the terms of the Advanced Healthcare Directive.
2. The healthcare provider believes that accommodating the terms of the Healthcare Directive will not require time, staff or resources that would otherwise be utilized in the care of other individuals.

Healthcare providers are required to document the presence or absences of these circumstances if, and only if, time, circumstances and professional judgment permit such documentation.

Guideline #3: Communicating with Legal Representatives for Healthcare Decisions during a Healthcare Surge

A healthcare provider is not obligated to locate or obtain informed or other consent from a patient's legal representative for healthcare decisions (including but not limited to the parent or guardian of a minor child, a conservator, an agent for health care decisions, a surrogate or next of kin), before rendering a healthcare service or procedure during a healthcare surge, unless the following circumstance is present:

1. The healthcare provider knows that the legal representative for healthcare decisions is immediately available to the healthcare provider. "Immediately available" means the representative is physically present next to the patient.

Healthcare providers are required to document the presence or absences of these circumstances if, and only if, time, circumstances and professional judgment permit such documentation.

Guideline #4: Providing Services to Individuals with Special Needs during a Healthcare Surge

Individuals with special needs have the same rights to health care services as individuals who do not have special needs during a healthcare surge. Therefore, the decision by a health care provider as to whether an individual should be provided with health care services (including but not limited to health care services and procedures, pharmaceuticals and accommodations), should be based on the acceptable criteria for resource allocation as set forth in the 'Scarce Resource Allocation' section below and not on whether the individual meets the definition of an individual with special needs.

Guideline #5: Allocation and Withdrawal of Care:

Decisions as to who should receive care and when care should be withdrawn and/or discontinued should be based on the principles set forth in the 'Scarce Resources Allocation' section (Section V) below.

1. A healthcare provider may determine that an individual will not receive care, or that care currently being provided to an individual will be discontinued or withdrawn, based on the criteria identified in Section V below. Examples of care that may be denied or discontinued or withdrawn in order to allocate limited resources in accordance with the criteria identified in Section V, include but are not limited to ventilator support, antibiotics, hydration and life-sustaining nutritional support, ICU and other facility beds and supplies, and blood.



2. When a decision is made to deny or discontinue or withdraw care, palliative care should be offered to the affected individual whenever such palliative care is reasonably available. Palliative care includes, but is not limited to, sedation and supplements to breathing.
3. When a decision is made to deny or discontinue or withdraw care, the healthcare provider should, when time and circumstances reasonably permit, clearly document the rationale for the decision on a document that will be retained.

Guideline #6: Disposal of Human Remains during a Healthcare Surge

To the extent possible, cultural preferences and rituals should be honored during the disposal of human remains. Surge planners might be able to consult, in advance, with local cultural informants to consider the feasibility of alternative arrangements that would be acceptable.

However, during a healthcare surge, the manner and process for disposing of human remains will be based on directives from state and local health care authorities and not on the requests of the patient in an Advanced Health Care Directive or requests by the patient's legal representative for health care decisions.

The tools above aim to release healthcare facilities and providers of certain legal obligations that could not appropriately be met during a healthcare surge. These tools are meant to alleviate legal liability but not to dismiss each caregiver's ethical obligations to individuals wherever possible.

It is also recommended that, to the extent possible, healthcare providers and facilities, both existing and alternate care sites, inform all patients that during a healthcare surge, pre-established patient rights may be waived / changed. For a listing of current patient rights laws, please refer to the Appendix.



11. Scarce Resource Allocation

The provision of care in the setting of a large-scale disaster must be a sliding scale of care appropriate to the resource demands of the event. Healthcare facilities and providers managing a large excess of demand over supply of services during a healthcare surge will likely need to allocate resources in ways that are unique to the surge event.

In 1993, the American Medical Association published *Ethical Considerations in the Allocation of Organs and Other Scarce Medical Resources among Patients*,¹⁶⁹ a report that gives guidance to physicians who must make critical allocation decisions due to a naturally limited supply of available resources. Guidelines from this report were extracted and made applicable to a healthcare surge environment. The guidelines below give ethical guidance to healthcare facilities and providers for both the acceptable and the inappropriate criteria for making resource allocation decisions during a healthcare surge event.

Acceptable Criteria for Resource Allocation among Patients

Likelihood of Survival

During a healthcare surge, priority of resource allocation and treatment should be given to patients with a greater likelihood of survival. This is an essential component in maximizing best outcomes and saving the most number of lives.

Change in Quality of Life

The benefit of the population of patients during a healthcare surge will be maximized if treatment is provided to patients who will have the greatest improvement in quality of life. Change in quality of life can be defined by comparing functional status with treatment to functional status without treatment.

Duration of Benefit

The length of time each patient will benefit from treatment is an appropriate consideration in allocating scarce medical resources during a healthcare surge. By giving higher priority to patients who will benefit longer than other patients, scarce resources will be directed to patients who will benefit the most.

Urgency of Need

Prioritizing patients according to how long they can survive without treatment can often maximize the number of lives saved. However, urgency of need should only be applied to patients who have presented themselves during a healthcare surge, not to hypothetical patients that a healthcare facility or provider forecasts receiving. Resources should not be denied to patients because other patients with more urgent need may soon present.

Amount of Resources Required

In a situation where resources are limited, it will be necessary to treat patients who will need less of a scarce resource rather than patients expected to need more. This will maximize the number of patients who will benefit.

Inappropriate Criteria for Resources Allocation among Patients

Ability to Pay



During a healthcare surge, healthcare facilities and providers should not systematically deny needed resources to patients simply due to their lower economic status.

Social Worth

A patients' contribution to society, or his/her social worth, should not be a factor in resource allocation decisions during a healthcare surge. A social worth criterion undermines the focus on the welfare of the patient and prohibits achievement of the overall goal to maximize the best outcome for the greatest number of patients.

Patient Contribution to Disease

This criterion assigns a lower priority to patients whose past behaviors are believed to have contributed significantly to their present need for scarce resources. Examples include heart transplant candidates whose high fat diets may have contributed to their condition. Using judgments about patients' morals to allocate healthcare is inappropriate and inconsistent.

Past Use of Resources

It may be argued that during a healthcare surge, patients who have had considerable access to a scarce medical resources in the past should be given a lower priority than equally needy patients who have, up to the time of the surge, received relatively less of that resource. For instance, a patient could be displaced from an ICU by another patient with the same condition and prognosis but less past access, or a re-transplant patient could be denied any chance at all of receiving additional organs. Because past use is irrelevant to present need, it should not factor into allocation decisions.

Special Case - Allocation of Ventilators for Pandemic Flu Scenario

The following is adopted from a draft of the New York State Task Force on Life and the Law, March 2007.¹⁷⁰

Duty to Care

The ethical rationing system for allocation of ventilators must support the fundamental obligation of health care professionals to care for patients. While ventilator allocation decisions may involve the choice between life and death, to the fullest extent possible, physicians must strive to ensure the survival of each individual patient. Guidelines must stress the provision of care that is possible when ventilation is not. Patients who do not receive mechanical ventilation must not be disregarded entirely. These patients must receive the next best care under the circumstances, whether it be other forms of curative treatment or palliative care.

Duty to Steward Resources

During a healthcare surge, clinicians will need to balance the obligation to save the greatest possible number of lives against their long standing responsibilities to care for each single patient. Government and healthcare providers must embrace this obligation to devise a rationing system and be prepared for the ethical tension that will result.

Duty to Plan



Planning is not a recommendation but an obligation. The absence of guidelines would leave important allocation decisions to be made by exhausted providers which would result in a failure of responsibility toward both patients and providers.

Distributive Justice

The same allocation guidelines should be used across the state. These allocation guidelines must not vary from private to public sector. They need to remain consistent throughout the community at hand. Also, the allocation of ventilators from state and federal stockpiles must take into account the ratio of local populations to available resources, designating appropriate resources for the most vulnerable who are most likely to suffer the greatest impact in any disaster.

Transparency

Any just system of allocating ventilators will require robust efforts to promote transparency. Proposed guidelines should be publicized and translated into different languages as necessary. However, disaster planning must not serve as a covert means to resolve the long-standing problems of health care.

Guidelines Related to the Withdrawal / Restriction of Ventilator Support

During a healthcare surge, as the demand for mechanical ventilation increases, the available supply of each facility's ventilators will naturally decrease. To speak to this dilemma, in *Concept of Operations for Triage of Mechanical Ventilation in an Epidemic*, Hick, et al. published a number of criteria to be used with regards to the withdrawal or restriction of ventilator support. Hick et al. recommend that criteria for ventilator allocation should be implemented in a tiered fashion to provide a scalable framework for restriction. Hick's criteria have been listed below as a sample of triage that may occur during a healthcare surge.

First-Tier Criteria

The first tier would eliminate access to ventilators for patients with the highest probability of mortality.

Second-Tier Criteria

If resources continue to decrease during a healthcare surge, the second tier would deny ventilatory support to patients with respiratory failure as well as a high use of additional resources. This tier includes patients who have a pre-existing illness with a poor prognosis.

Third-Tier Criteria

When resources continue to decrease, a third tier of criteria would need to be implemented. These criteria lack the specificity of the first two, as Hick et al. suggest that this may need to be a real time decision on criteria to be used.

Note: Hick et al. also proposed the very controversial idea that any patient 'who might be stable, or even improving, but whose objective assessment indicates a worse prognosis than other patients who require the same resource'¹⁷¹ should be extubated to free up the ventilator for the new patient with the better prognosis. The New York State Task Force on Life and the Law disagreed with such a view, expressing significant reservations due to the fact that



'patients require a sufficient trial on the ventilator in order to determine it benefit,' and that 'if ventilator use is primarily determined by the health of other potential users of the ventilator, clinicians must abandon their obligation to advocate for individual patients.'

Allocation of Ventilators - Sample Clinical Evaluation

Mechanical ventilators should be allocated to patients during a pandemic based on each patient's clinical evaluation. There are many scoring tools available that should be considered as warranted by the circumstances. These include APACHE (Acute Physiology and Chronic Health Evaluation), SAPS (Simplified Acute Physiology Score), PIMS (Pediatric Index of Mortality Score), PYLL (Potential Years of Life Lost) and the similar Fair Innings Argument. Also, the Agency for Healthcare Research and Quality (AHRQ) has released 'Project XTREME,' an interactive cross-training program to teach non-respiratory therapy healthcare professionals to provide basic respiratory care and ventilator management in a public health emergency.¹⁷²

However, in this sample clinical evaluation, OHPIP's (Ontario Health Plan for an Influenza Pandemic) clinical protocol and each patient's SOFA score (Sepsis-related Organ Failure Assessment) was used.

The OHPIP protocol utilizes the SOFA score to add points to each patient based on objective measures of function in six key organs and systems: lungs, liver, brain, kidneys, blood clotting and blood pressure. A perfect SOFA score, indicating normal function in all six categories, is 0; the worst possible score is 24 and indicates life-threatening abnormalities in all six systems. SOFA scale included directly below.

11.1. Sequential Organ Failure Assessment (SOFA) score SOFA Scale

Variable	0	1	2	3	4
PaO ₂ /FiO ₂ mmHg	>400	≤ 400	≤ 300	≤ 200	≤ 100
Platelets, x 10 ³ /μL (x 10 ⁶ /L)	> 150 (>150)	≤ 150 (≤ 150)	≤ 100 (≤ 100)	≤ 50 (≤ 50)	≤ 20 (≤ 20)
Bilirubin, mg/dL (μmol/L)	<1.2 (<20)	1.2-1.9 (20 – 32)	2.0-5.9 (33 – 100)	6.0-11.9 (101 – 203)	>12 (> 203)
Hypotension	None	MABP < 70 mmHg	Dop ≤ 5	Dop > 5, Epi ≤ 0.1, Norepi ≤ 0.1	Dop > 15, Epi > 0.1, Norepi > 0.1
Glasgow Coma Score	15	13 - 14	10 - 12	6 - 9	<6
Creatinine, mg/dL (μmol/L)	< 1.2 (<106)	1.2-1.9 (106 – 168)	2.0-3.4 (169 - 300)	3.5-4.9 (301 – 433)	>5 (> 434)

Dopamine [Dop], epinephrine [Epi], norepinephrine [Norepi] doses in ug/kg/min. SI units in brackets

Adapted from: Ferreira FI, Bota DP, Bross A, Melot C, Vincent JL. Serial evaluation of the SOFA score to predict outcome in critically ill patients. JAMA 2001; 286(14): 1754-1758. Explanation of variables: PaO₂/FiO₂ indicates the level of oxygen in the patient's blood. Platelets are a critical component of blood clotting. Bilirubin is measured by a blood test and indicates liver function. Hypotension indicates low blood pressure; scores of 2, 3, and 4 indicate that blood pressure must be maintained by the use of powerful medications that require ICU monitoring, including dopamine, epinephrine, and norepinephrine. The Glasgow coma score is a standardized measure that indicates neurologic function; low score indicates poorer function. Creatinine is measured by a blood test and indicates kidney function.



Patients on ventilators pre-event will also be assessed to see whether they meet criteria for continued use. When a ventilator becomes available and many potential patients are waiting, clinicians may choose the patient with pulmonary failure who has the best chance of survival with ventilatory support, based on objective clinical criteria.

Time Trials

The New York State Task Force on Life and the Law recommends that continued use of ventilators will be reviewed and reassessed at intervals of 48 and 120 hours. However, it is suggested that the time trials be shortened, and that patients on ventilatory support should be reviewed every 12 hours if time permits. Patients who continue to meet criteria for benefit or improvement would continue until the next assessment, while those who no longer meet these criteria would lose access to mechanical ventilation.

Exclusion Criteria

The New York State Task Force on Life and the Law recommends that clinicians assess patients for exclusion criteria both to determine the appropriateness of the initiation and continuation of ventilator use. Exclusion criteria should focus primarily on current organ function, rather than on specific disease entities. A revised set of exclusion criteria is presented below.

Exclusion Criteria for Ventilator Access*

- Cardiac arrest: unwitnessed arrest, recurrent arrest, arrest unresponsive to standard measures; Trauma-related arrest
- Metastatic malignancy with poor prognosis
- Severe burn: body surface area >40%, severe inhalation injury
- End-stage organ failure:
 - Cardiac: NY Heart Association class III or IV
 - Pulmonary: severe chronic lung disease with FEV1** < 25%
 - Hepatic: MELD*** score > 20
 - Renal: dialysis dependent
 - Neurologic: severe, irreversible neurologic event/condition with high expected mortality

*Adapted from OHPIP guidelines

** Forced Expiratory Volume in 1 second, a measure of lung function

*** Model of end stage liver disease

These criteria must be seen as guidelines, not standards. 'More important than the specifics of any tool (which will require modification based on the event) is the establishment of a process for making decisions to limit care so that in a time of crisis, a mechanism is in place to apply as much science as possible to these decisions and the persons involved are prepared for their roles.'¹⁷¹



12. Surge Capacity and Capability: An Overview

12.1. Community Based Surge Capacity and Capability

The concepts, ideas and content in this section are based on the discussions of the expert panel and references from a report by The CNA Corporation, *Medical Surge Capacity and Capability: A Management System for Integrating Medical and Health Resources during Large-Scale Emergencies*, August 2004.

Currently, patient care during emergencies or disasters is provided primarily at community-based hospitals, integrated healthcare systems, private physician offices, and other point-of-service medical facilities. The delivery of care is based on individual facility's preparedness, capacity and capability. However, this approach to response during a healthcare surge is sub-optimal from a population outcome perspective as well as from a scarce resource utilization perspective. In a mass casualty incident, healthcare facilities may lack the necessary resources and/or information to individually provide optimal patient care.

According to the CNA report, "research has shown that most individual healthcare facilities possess limited surge supplies, personnel, and equipment, and that vendors or anticipated "backup systems" for these critical assets are often shared among local and regional healthcare facilities. This "double counting" of resources diminishes the ability to meet individually projected surge demands across multiple institutions" during a healthcare surge.

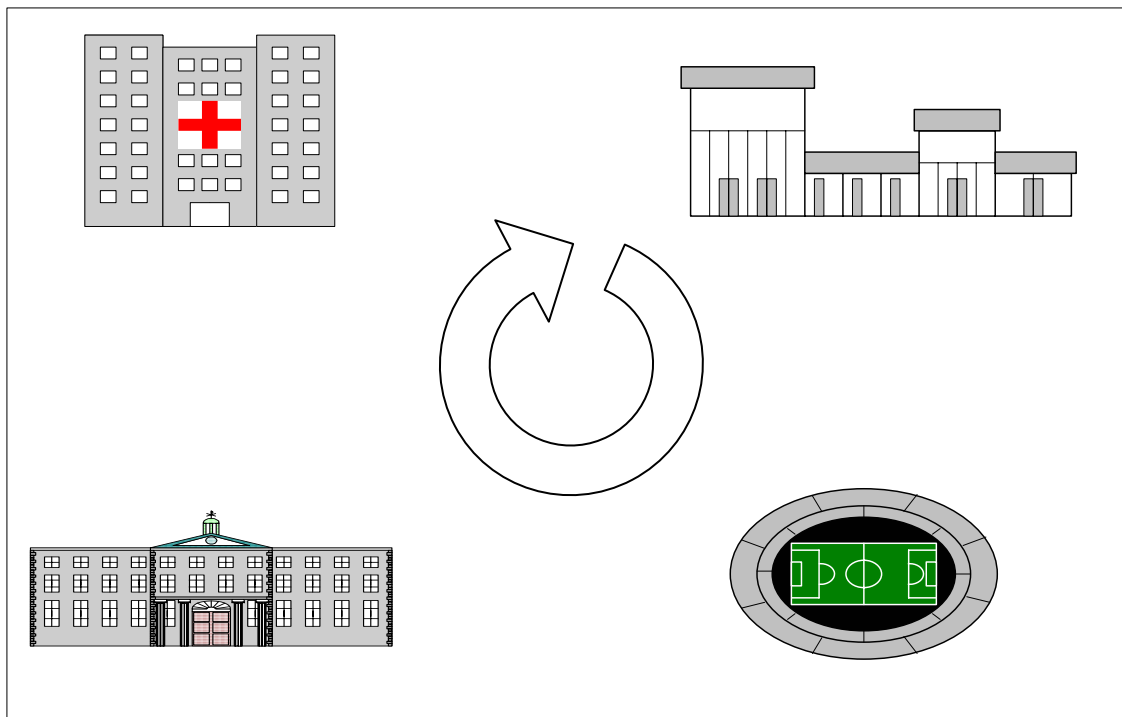
These community healthcare assets, therefore, must collaboratively develop community surge capacity and capability. This does not, however, preclude or diminish the need for individual healthcare facilities to have a comprehensive emergency management plan that addresses mitigation, preparedness, response, and recovery activities. However, efforts must extend beyond optimizing internal emergency management plans and focus on integrating with other healthcare and non-healthcare assets in the community, public and private. For example, communities should consider developing Memorandum of Understanding (MOU) for transfer of patients from hospitals to skilled nursing facilities (SNF). If SNFs and nursing homes can support the hospital or even hold their own then it will save a lot of hospital beds for the victims during a healthcare surge. Refer to the Appendix for Alameda County's MOU with SNFs and rehabilitation facilities to voluntarily coordinate mutual aid services during a disaster. Similarly, during a Pandemic Influenza, Home Health Care will play a critical role, especially when such patients are either infected or when hospitals are overwhelmed. Community based planning to define the role of home health care and availability of personnel to support such care will enable communities to better respond to an outbreak. Community based planning would allow existing healthcare resources in the public and private sectors as well as other non-healthcare assets to be optimally leveraged. Advantages of community based planning include, shared costs and funding, regulatory/standards compliance, purchasing coalitions, and shared knowledge. To encourage community based planning the government could consider tax breaks for participating members.

One of the challenges in creating a community surge capacity is the possible lack of buy-in from medical clinics, private physician offices, and other healthcare and non-healthcare assets. Because the private medical community is diverse, there are differences in capacity, capability,



and constraints to implementing these processes. It is important to recognize that many community healthcare assets do not have the management infrastructure or personnel necessary to establish complex processes for incident preparedness and response. Thus, it is imperative that larger healthcare facilities in the community take a leadership role to initiate and maintain communication, develop trust and make the community planning effort inclusive.

The community based surge capacity and capability is composed of healthcare facilities and non-healthcare facilities to form a unified entity in a defined geographic area. During a surge, a unified entity facilitates effective communications and consistent information sharing with local government. While the community assets retain their management autonomy during surge response, they coordinate and participate in information and asset sharing. A critical component of community based surge capacity and capability response is mutual aid—the sharing of personnel, facilities, equipment, or supplies. Since not all healthcare facilities, especially smaller hospitals and non-hospital facilities, participate in Hospital Preparedness Program (HPP) funded activities, mutual aid becomes critical for these clinics to be able to successfully participate in community based response plans. Mutual aid provides surge capacity and capability that is immediately operational, reliable, and cost-effective.





12.2. Community Participants

An important element of the community based capacity and capability is inclusion and integration of non-healthcare entities in the community. Below is a checklist of community members to consider for community based planning:

	Community Participant	Role
<input type="checkbox"/>	Local Emergency Medical Services Authority	Local implementing arm of the Emergency Medical Systems Authority.
<input type="checkbox"/>	Law Enforcement and Fire	Emergency first responders
<input type="checkbox"/>	Public works & local Utility Companies	Essential services
<input type="checkbox"/>	Communication Companies	Communication needs
<input type="checkbox"/>	Major employers and business community, especially big-box retailers (e.g. Costco, Sam's Club)	Essential supplies and services
<input type="checkbox"/>	Area Airports	Transportation
<input type="checkbox"/>	Red Cross/Salvation Army and other non-profit organizations	Volunteers and Supplies Aid
<input type="checkbox"/>	National Guard and Military Establishments	Transportation and infrastructure support
<input type="checkbox"/>	Chamber of Commerce	Business community support
<input type="checkbox"/>	Board of Realtors	Help coordinate additional space for healthcare facilities
<input type="checkbox"/>	City Unified School District and Community Colleges	Alternate Care Sites
<input type="checkbox"/>	Public transportation	Transportation
<input type="checkbox"/>	Faith based organizations	Translation and funeral services
<input type="checkbox"/>	Private security firms	Security services
<input type="checkbox"/>	Mortuaries	Funeral services
<input type="checkbox"/>	Community emergency response teams	Volunteers
<input type="checkbox"/>	Medical Reserve Corps (MRC)	Volunteers
<input type="checkbox"/>	Miscellaneous services	Financial, accounting, general services
<input type="checkbox"/>	Vetrinary Shelters/Pet Boarding and Care	Pet care for workers/evacuees

The community based capacity and capability may include healthcare and non-healthcare assets from multiple jurisdictions. This may be desirable especially in rural areas, where health



and medical assets are scattered. Since rural isolated facilities cannot rely on receipt of supplies, medications and durable medical equipment from Strategic National Stockpile in a timely manner, they have an even greater need to form a community based capacity and capability especially with private sector.

Community Based Surge Capacity and Capability Standards

The Joint Commission's Environment of Care provides guidance on standards for community based surge capacity and capability. These standards will become effective January 1, 2008

- EC.4.11: The organization plans for managing the consequences of emergencies.

An emergency in a health care organization or in its community can suddenly and significantly affect demand for its services or its ability to provide those services. The organization's Emergency Management Program defines a comprehensive approach to identifying risks and mobilizing an effective response within the organization and in collaboration with essential response partners in the community.

- EC.4.12: The organization develops and maintains an emergency operations plan.

A successful response relies upon planning around the management of six critical areas: communications; resources and assets; safety and security; staffing; utilities; and clinical activities. While the Emergency Operations Plan can be formatted in a variety of ways, it must address these six critical functions to serve as a blueprint for managing care and safety during an emergency.

Some emergencies can escalate unexpectedly, or strain not only the organization but the entire community. An organization cannot mitigate risks, plan thoroughly, and sustain an effective response and recovery without preparing its staff and collaborating with the community, suppliers and external response partners. Such an approach will aid the organization in developing a scalable response capability, and in defining the timing and criteria for decisions involving sheltering in place, patient transfer, facility closings, or evacuation.

- EC.4.14: The organization establishes strategies for managing resources and assets during emergencies.

During emergencies healthcare organizations that continue to provide care, treatment and services to their patients must sustain essential resources, materials, and facilities. The emergency operation plan should identify how resources and assets will be solicited and acquired from a range of possible sources, such as vendors neighboring healthcare providers, other community organizations, state affiliates, or a regional parent company.

The organization establishes processes to collaborate with health care organizations outside of the community in the event of a regional or prolonged disaster that requires resources and assets from outside the immediate geographic area.

The organization establishes processes to receive and care for evacuees from other communities consistent with the organization's role in the state or local emergency operations plan.



12.3. Surge Capacity Strategies

According to a report by Health Systems Research Inc., *Altered Standards of Care in Mass Casualty Events*; an AHRQ Publication, April 2005 and The Recommendations of the state Expert Panel on Inpatient and Outpatient Surge Capacity, *Guidelines for Managing Inpatient and Outpatient Surge Capacity*, state of Wisconsin, November 2005, if a facility determines they are experiencing a healthcare surge they are to use the following guidelines to assess and prepare for the need to increase patient care capacity:

- Rapid discharge of emergency department (ED) and other outpatients who can continue their care at home safely
- Cancellation of elective surgeries and procedures, with reassignment of surgical staff members and space
- Reduction of the usual use of imaging, laboratory testing, and other ancillary services
- Transfer of patients to other institutions in the state, interstate region, or nationally.
- Facilitation of home-based care for patients in cooperation with public health and home care agencies
- Facilities should consider cohorting surge capacity patients rather than spread them out. This cohorting will also be necessary for pediatric and adolescent patients.
- Specifically for hospitals:
 - Expansion of critical care capacity by placing select ventilated patients on monitored or step-down beds; using pulse oximetry (with high/low rate alarms) in lieu of cardiac monitors; or relying on ventilator alarms (which should alert for disconnect, high pressure, and apnea) for ventilated patients, with spot oximetry checks
 - Conversion of single rooms to double rooms or double rooms to triple rooms if possible
 - Designation of wards or areas of the facility that can be converted to negative pressure or isolated from the rest of the ventilation system for cohorting contagious patients; or use of these areas to cohort those health care providers caring for contagious patients to minimize disease transmission to uninfected patients
 - Use of cots and beds in flat space areas (e.g., classrooms, gymnasiums, lobbies) within the hospital for non-critical patient care
 - Avert elective admissions at tertiary hospitals and discharge patients to rehab or a SNF or to home healthcare.
 - Obstetrics (OB) is to be considered as a “clean” unit (no infectious patients should be placed in OB), but may be filled with other “clean” patients only as a last resort.
 - Any unit that is used for immuno-suppressed patients should be treated in the same way as the OB unit and thus should not be counted as inpatient surge capacity beds.
 - Nursery beds are not to be considered as potential inpatient surge capacity beds even for infants, since these beds are used only for neonates <28 days. If an infant with an



infectious disease or with trauma is brought in, the infant is to be placed in pediatrics (PEDS).

Facilities need to identify wings, areas and spaces that could be opened and/or converted for use as patient/inpatient treatment areas. These potential treatment areas included such areas or spaces as:

- Waiting Rooms
- Wings previously used as inpatient areas that can be reopened
- Conference Rooms
- Physical Therapy Gyms
- Medical Office Buildings
- Parking Lots
- Temporary shelters on facility premises (including cots in tents)

Obviously, there is a hierarchy among these rooms as to which would best and first be used as patient/inpatient surge capacity treatment areas. This selection of areas to be used for surge capacity can best take place when the facility has an understanding of the intensity of the incident and the resulting number of surge patients that it may receive. Collaboration and the establishment of alert protocols with Emergency Medical Services, First Responders and the Emergency Operations Center (EOC) will provide facilities with the necessary information to implement the appropriate number of patient/inpatient surge capacity.

12.4. Role of Clinics and other Outpatient Facilities

Community clinics, including Indian health clinics operated by tribal government entities, have a significant role in providing medical care to underserved urban and rural communities. While their capabilities are limited, they are likely to be significant points of convergence for ambulatory patients seeking care because:

- "Victims often seek medical care in settings they are familiar with, such as a personal physician's office;
- When medical surge demands severely challenge hospitals, patients may seek care at other healthcare facilities;
- Some victims' treatment requirements may be adequately managed in these smaller settings; and
- Certain events, such as a biological agent release, may be prolonged in duration and generate patients that can be safely evaluated in these settings, thus relieving some of the burden on larger healthcare facilities". (The CNA Corporation, *Medical Surge Capacity and Capability: A Management System for Integrating Medical and Health Resources During Large-Scale Emergencies*, August 2004)

According to California Emergency Medical Services Authority, *California Disaster Medical Response Plan*, January 24, 2007, the use of off site facilities, such as freestanding Outpatient Surgery Centers, for treatment of specified injuries (orthopedic or abrasion/lacerations which



require more than first aid) will free up necessary resources at the hospital. Increasingly, licensing, accreditation, and funding agencies require community clinics to develop disaster response plans and perform hazard vulnerability assessments.

Urgent care centers, dialysis clinics, and other non-hospital facilities also provide essential medical services. Following a catastrophic disaster these facilities, along with community clinics, have several potential response roles and responsibilities:

- Protection of staff and patients.
- Stabilization of casualties who are injured on site or converge to the facility.
- Maintaining continuity of care to ambulatory patient base
- Creating a surge capacity resource for the treatment of stable, low priority incident and/or non- incident patients
- Creating a venue to establish specialty disaster services, such as blood donation stations, worried well centers, and mental health services.
- Participation, consistent with the organization's mission, capability and role as planned and provided for in the local system, in the OA's medical and health response.
- If unable to provide services, referring both usual patients and disaster victims to appropriate alternative sources of medical care.
- In addition to keeping the facility open, provide assistance with recruiting medical personnel or volunteers to augment staff at other health care facilities or service sites.
- Supporting OA medical response through language services and outreach and information dissemination to limited-English proficient and isolated communities.
- Rapid restoration of function to provide services to its usual patient population.

To meet these responsibilities, non-hospital facilities should:

- Develop and exercise disaster plans for internal and external emergencies both separately and simultaneously.
- Train staff in disaster operations including operating under Incident Command System (ICS).
- Establish communication and coordination links with their MHOAC and as specified in local plans.
- Prepare their facilities by mitigating non-structural hazards

California Primary Care Association's The Community Clinic & Health Center Emergency Operations Plan Template, 2004, provides extensive guidance to community clinics in the development of their emergency management plans and programs. The template contains sections for mitigation, preparedness, response and recovery. The appendix section contains extensive tools that enable planners to develop their emergency operations plan. The document can be accessed at: <http://www.emsa.ca.gov/hbppc/hbppc.asp>. The next update to the plans is expected to include Pandemic Influenza planning and an MOU template (see the draft version of the MOU template in Appendix SC 3).



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- ⁱ Govt. Code, §§8550, et seq.
 - ⁱⁱ Depending upon the jurisdiction, the designated official may be the director of emergency services, the director or medical director of the local emergency medical services agency, or medical health operational area coordinator. A description of these officials is provided later in this document.
 - ⁱⁱⁱ Health & Saf. Code, §1276.
 - ^{iv} Govt. Code, §8571.
 - ^v Govt. Code, §8567. Local governing bodies have similar authority under a local emergency to enact ordinances, but these ordinances would be subordinate to state statutes, regulations, and orders of the Governor.
 - ^{vi} 22 Cal. Code Reg., §70217. This regulation does allow for some flexibility where a healthcare emergency (i.e., an unpredictable or unavoidable occurrence at unscheduled or unpredictable intervals relating to healthcare delivery requiring immediate medical interventions and care) causes a change in the number of patients on a hospital unit. However, the hospital must demonstrate that prompt efforts were made to maintain required staffing levels.
 - ^{vii} See Govt. Code, §8550.
 - ^{viii} Civil Code, §1714.
 - ^{ix} Government Code, §8659.
 - ^x *Burciaga v. St. John's Hospital* (1986) 187 Cal.App.3d 710.
 - ^{xi} *Bryant v. Bakshandeh* (1991) 226 Cal.App.3d 1241
 - ^{xii} *Calatayud v. State of California* (1998) 18 Cal. 4th 1057, 1064.
 - ^{xiii} Bus. & Prof. Code, §2727.5
 - ^{xiv} Bus. & Prof. Code, §1627.5.
 - ^{xv} Bus. & Prof. Code, §2861.5.
 - ^{xvi} Bus. & Prof. Code, §3503.5
 - ^{xvii} Health & Saf. Code, §1799.102.
 - ^{xviii} Health & Saf. Code, §1799.104.
 - ^{xix} Health & Saf. Code, §1799.106.
 - ^{xx} Health & Saf. Code, §1799.107.
 - ^{xxi} See, e.g. Bus. & Prof. Code, §2727.5, applying to nurses.
 - ^{xxii} Health & Saf. Code, §1799.102, applying to any person outside of an emergency room or place where care is usually offered.
 - ^{xxiii} Bus. & Prof. Code, §2397.
 - ^{xxiv} See Govt. Code, §204; "The State may require services of persons, with or without compensation: . . . in protecting life and property from fire, pestilence, wreck and flood."
 - ^{xxv} Govt. Code, §8599.
 - ^{xxvi} Govt. Code, §3101.
 - ^{xxvii} Govt. Code, §3100.
 - ^{xxviii} See Labor Code, §3600.6, §§3211.9-3211.93a, and §§4350-4355; 19 Cal. Code Reg. 2570, et seq.
 - ^{xxix} 19 Cal. Code Reg. 2570.2.
 - ^{xxx} Govt. Code 8657.
 - ^{xxxi} Civil Code, §1714.5; the exception here is essentially identical to the Good Samaritan exception for physicians, and the exception to the specific provider immunity in a declared emergency under Govt. Code section 8659, discussed above.
 - ^{xxxii} 19 Cal. Code Reg. 2572.1(j).
 - ^{xxxiii} Civil Code, §1714.5.
 - ^{xxxiv} Health & Saf. Code, §1317(a).
 - ^{xxxv} Health & Saf. Code, §1317(c).
 - ^{xxxvi} Health & Saf. Code, §1317(g).
 - ^{xxxvii} Govt. Code, §8665.
 - ^{xxxviii} Civil Code, §1714.6.
 - ^{xxxix} Civil Code, §1714.6.
 - ^{xl} There is an immunity from liability for refusal to treat based on a determination that the health facility does not have the appropriate facilities or qualified personnel available to render those services. (Health & Saf. Code, §1317(c)).



- xli Hospitals with emergency departments are required under the Emergency Medical Treatment and Labor Act (EMTALA) to provide a screening and stabilization within the abilities of the staff and facilities available prior to transferring the patient to another facility. (42 U.S.C. 1395dd.) This federal requirement can be waived by the Secretary for Health and Human Services under 42 U.S.C. 1320b-5(b)(3).
- xlii See, e.g., Business & Profs. Code, §§1627.5, 2395, 2727.5, 2861.5, and 3503.5.
- xliii At present, no standby orders suspending healthcare standards exist.
- xliv Health & Saf. Code, §1276.
- xlvi Govt. Code, §8567.
- xlvi Govt. Code, §8665.
- xlvi Govt. Code, §8567b.
- xlvi A local health officer may take preventive measures to protect public health, including protective step that may be taken against any public health hazard that is caused by a disaster and affects the public health. This could, in limited circumstances, include control over vaccine distribution, but not commandeering of either the vaccine or personnel to administer it.
- xlix Govt. Code, §8567.
- i Govt. Code, §§8550, et seq.
- li Govt. Code, §8550.
- lii Govt. Code, §8567.
- liii Govt. Code, §8571.
- liv Govt. Code, §8572.
- lv There are three types of emergencies under the ESA; state of war emergency, state of emergency, and local emergency. (See Govt. Code, §8558.)
- lvi Govt. Code, §8627.
- lvii Govt. Code, §8628.
- lviii Govt. Code, §8575, et seq.
- lix Govt. Code, §8579(b)(1).
- lx Govt. Code, §8549.10.
- lxi Govt. Code, §8549.13.
- lxii Govt. Code, §8585.
- lxiii Govt. Code, §8586.
- lxiv Govt. Code, §8587.
- lxv Ibid.
- lxvi California State Emergency Plan, 2005, pp. 8, 9.
- lxvii Govt. Code, §8569.
- lxviii Govt. Code, §8568.
- lxix Govt. Code, §8595.
- lxx Govt. Code, §8570.
- lxxi Govt. Code, §8572.
- lxxii Health & Saf. Code, §§1797.100, et seq.
- lxxiii Health & Saf. Code, §§1797.150.
- lxxiv California State Emergency Plan, 2005, p. 58.
- lxxv California State Emergency Plan, 2005, p. 56.
- lxxvi Health & Saf. Code, §1797.160.
- lxxvii Ibid.
- lxxviii Health & Saf. 100100, et seq.; effective July 1, 2007, the public health duties of the State Department of Health Services are transferred to the new State Department of Public Health, Health & Saf. Code, §131000, et seq.
- lxxix California State Emergency Plan, 2005, p. 58.
- lxxx California State Emergency Plan, 2005, p. 56.
- lxxxi Health & Saf. Code, §§1200, et seq.
- lxxxii Health & Saf. Code, §1276.
- lxxxiii Govt. Code, §6502.
- lxxxiv Govt. Code, §8615.
- lxxxv Govt. Code, §§8617, 8561.



- lxxxvi California Disaster and Civil Defense Master Mutual Aid Agreement, ¶1.
- lxxxvii Govt. Code, §8615.
- lxxxviii Govt. Code, §8600.
- lxxxix Govt. Code, §8559(a).
- xc California State Emergency Plan, 2005, pp. 8, 10.
- xcj Health & Saf., §1797.152(a).
- xcii Health & Saf., §1797.152(b).
- xciii Govt. Code, §8619.
- xciv Govt. Code, §§178, et seq.
- xcv Govt. Code, §179.5, et seq.; inoperative effective March 1, 2007; for proposed extension of operability, see AB 1564 (Nava), 2007-2008 Session.
- xcvi Robert T. Stafford Disaster Relief and Emergency Assistance Act, P.L. 93-288, 100-707, and 106-390, 42 U.S.C. §5121, et seq.
- xcvii Govt. Code, §8560.
- xcviii Govt. Code, §8616.
- xcix Govt. Code, §8610.
- c Ibid.
- ci Ibid.
- cii Govt. Code, §8585.5.
- ciii 19 Cal. Code Reg. 2570.2
- civ Govt. Code, §8612; 19 Cal. Code Reg. §2571.
- cv Labor Code, §3211.92.
- cvl Govt. Code, §8610.
- cvii Govt. Code, §8610.
- cviii Govt. Code, §8614.
- cix In a letter dated September 28, 2006, the Director of OES certified to the federal Department of Homeland Security the compliance of SEMS with the National Incident Management System (NIMS) for fiscal year 2006.
- cx 19 Cal. Code Reg., §2400, et seq.
- cxj Govt. Code, §8607(d).
- cxii Govt. Code, §8607(e).
- cxiii Govt. Code, §8607(a)(1); Cal.Code Reg., §§2401, 2402(l), and 2405.
- cxiv Govt. Code, §8607(a)(2); 19 Cal.Code Reg., §2401, 2402(n).
- cxv Govt. Code, §8607(a)(3); 19 Cal. Code Reg., §2415; See *Emergency Management in California*, OES, 2003, p. 8.
- cxvi Govt. Code, §8618.
- cxvii Govt. Code, §§8559(b), 8605, and 8607(a)(4);
- cxviii Govt. Code, §§8559(b), 8605.
- cxix Govt. Code, §8605.
- cxx 19 Cal. Code Reg., §2402(f).
- cxxi 19 Cal. Code Reg., §2402(c).
- cxxii Health & Saf. Code, §1797.153.
- cxxiii Health & Saf. Code, §1797.153(c).
- cxxiv Under the proposed tool, such a declaration could occur at surge levels Orange, Red or Black.
- cxxv Govt. Code, §8630.
- cxxvi Govt. Code, §8631.
- cxxvii Govt. Code, §8632.
- cxxviii Govt. Code, §8634.
- cxxix Govt. Code, §26620.
- cxxxi Govt. Code, §26621.
- cccc Health & Saf. Code, §1797.200.
- cccci Health & Saf. Code, §1797.202(a).
- ccccii Health & Saf. Code, §101000.
- cccciii Health & Saf. Code, §101030.



- ^{cxv} Health & Saf. Code, §101460.
^{cxvi} Health & Saf. Code, §101375.
^{cxvii} Health & Saf. Code, §101175.
^{cxviii} See, generally, *Health Officer's Practice Guide for Communicable Disease Control*, 2007, DPH.
^{cxix} Health & Saf. Code, §120176.
^{cxl} Health & Saf. Code, §§101040, 101475.
^{cxli} Govt. Code, §8630.
^{cxlii} Health & Saf. Code, § 101080.
^{cxliii} Health & Saf. Code, §101085(c).
^{cxliv} Health & Saf. Code, §101085(b).
^{cxlv} Health & Saf. Code, §101085(a)(2), (3).
^{cxlvi} Health & Saf. Code, §101080.2(a).
^{cxlvii} Health & Saf. Code, §101275.
^{cxlviii} Health & Saf. Code, §101310.
^{cxlix} Health & Saf. Code, §1797.153.
^{cl} Health & Saf. Code, §1797.153(d).
^{cli} See Govt. Code, §§24000, 24010, and 24300.
^{clii} Govt. Code, §§27460, et seq.
^{cliii} Govt. Code, §§27490, et seq. and 27520, et seq.
^{cliv} Coroners Mutual Aid Plan, OES, 2006, p. 11.
^{clv} Coroners Mutual Aid Plan, OES, 2006, p. 16.
^{clvi} Govt. Code, §8630(b).
^{clvii} Govt. Code, §8630(c).
^{clviii} Govt. Code, §8630(d).
^{clix} Govt. Code, §8629.
^{clx} Govt. Code, §8629.
^{clxi} Depending upon the jurisdiction, the designated official may be the director of emergency services, the director or medical director of the local emergency medical services agency, or medical health operational area coordinator.
¹⁶² Adapted from Medical Board of California, Division of Licensing, Standard of Care for California Licensed Midwives. *Midwifery Standards of Care* (September 15, 2005). http://www.mbc.ca.gov/MW_Standards.pdf
¹⁶³ Virginia Jury Instructions, Civil Instruction No. 35.000. Steven D. Gravely, Troutman Sanders LLP. *Altered Standards of Care: An Overview*. http://www.vdh.state.va.us/EPR/pdf/Health_and_Medical_Subpanel.pdf
^{Note:} In The Supreme Court Of The State Of Hawaii, In The Matter of the Publication and Distribution of the Hawai'i Standard Civil Jury Instructions, Instruction No. 14.2: Standard Of Care:
 "It is the duty of a [physician/nurse/specialty] to have the knowledge and skill ordinarily possessed, and to exercise the care and skill ordinarily used, by a [physician/nurse/specialty] practicing in the same field under similar circumstances. A failure to perform any one of these duties is a breach of the standard of care".
¹⁶⁴ The Agency for Healthcare Research and Quality
¹⁶⁵ NYS Workgroup on Ventilator Allocation in an Influenza Pandemic, NYS DOH / NYS Task Force on Life & the Law. *Allocation of Ventilators in an Influenza Pandemic: Planning Document - Draft for Public Comment*. New York, 15 March 2007
¹⁶⁶ Principles of the Ethical Practice of Public Health, Version 2.2 © 2002 Public Health Leadership Society
¹⁶⁷ Altered Standards of Care in Mass Casualty Events. Prepared by Health Systems Research Inc. under Contract No. 290-04-0010. AHRQ Publication No. 05-0043. Rockville, MD: Agency for Healthcare Research and Quality. April 2005.
¹⁶⁸ Meeting the Needs of Vulnerable People in Times of Disaster: A Guide for Emergency Managers. California Governor's Office of Emergency Services, 2000
¹⁶⁸ Meeting the Needs of Vulnerable People in Times of Disaster: A Guide for Emergency Managers. California Governor's Office of Emergency Services, 2000
¹⁶⁸ Meeting the Needs of Vulnerable People in Times of Disaster: A Guide for Emergency Managers. California Governor's Office of Emergency Services, 2000
¹⁶⁹ Ethical Considerations in the Allocation of Organs and Other Scarce Medical Resources Among Patients. (*Arch Intern Med*. 1995; 155: 29-40). © 1993 American Medical Association.



¹⁷⁰ NYS Workgroup on Ventilator Allocation in an Influenza Pandemic, NYS DOH / NYS Task Force on Life & the Law. *Allocation of Ventilators in an Influenza Pandemic: Planning Document - Draft for Public Comment*. New York, 15 March 2007

¹⁷¹ Hick, J.L., et al; *Concept of Operations for Triage of Mechanical Ventilation in an Epidemic*; *Acad Emerg Med* 2006; 13:223-9

¹⁷² *Project Xtreme*. Cross-Training Respiratory Extenders for Medical Emergencies. April 2007. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.ahrq.gov/prep/projxtreme/>

¹⁷¹ Hick, J.L., et al; *Concept of Operations for Triage of Mechanical Ventilation in an Epidemic*; *Acad Emerg Med* 2006; 13:223-9